TW-EAV510 AC
USER GUIDE

xDSL modem
ADSL2+ / VDSL2

Wlan access point
5 Ghz and 2,4 Ghz and even 1300 Mbps speed

USB 2.0 Host
3G/4G/LTE support

Switch/firewall
4 x 10/100/1000Mbps LAN
1 x 10/100/100 Mbps WAN

copyright © TeleWell Oy

Contents

1 Product overview **1-1**

Hardware introduction 1-1

Safety precautions 1-2

Prerequisites 1-2

Description of LEDs and interfaces **TW-EAV510 AC Router may support following interface** 1-3

2 Hardware installation **2-1**

To install the TW-EAV510 AC Router 2-1

3 Accessing the TW-EAV510 AC Router web configuration tool **3-1**

To access the TW-EAV510 AC Router web configuration tool 3-1

4 Device Info **4-1**

Summary 4-2

WAN 4-3

Statistics 4-4

Route 4-10

ARP 4-11

DHCP 4-12

5 Advanced Setup **5-12**

Layer2 Interface 5-13

WAN Service 5-21

LAN 5-32

Ethernet Port 5-36

NAT 5-37

Security 5-40

Parental Control 5-47

3G/4G/LTE 5-51

Quality of Service 5-53

Routing 5-59

DNS 5-64

DSL 5-66

UPnP 5-70

DNS Proxy 5-71

DLNA 5-72

Storage service 5-72
Interface Grouping 5-73
IP Tunnel 5-74
IPSec 5-75
Power Management 5-77
Multicast 5-77
6 Wireless **6-78**
Basic Setting 6-79
Security Setting 6-81
MAC Filter 6-85
Wireless Bridge 6-86
Wireless Advanced 6-87
Station Info 6-91
7 Diagnostics **7-1**
Diagnostics 7-1
Fault Management 7-3
8 Management **8-5**
Settings 8-6
System Log 8-7
Security Log 8-10
TR-069 Client 8-11
Internet Time 8-13
Access Control 8-14
Update Software 8-16
Reboot 8-17
Tools 8-18
9 Troubleshooting **9-1**
10 TCP/IP configuration **10-5**

1 Product overview

Overview

Purpose

This chapter provides an introduction to the physical aspects of the TW-EAV510 AC Router including safety precautions, prerequisites, and descriptions of the LEDs and interfaces. The TW-EAV510 AC Router will be referred to as TW-EAV510 AC Router throughout the remainder of this document.

Contents

This chapter includes the following topics:

Hardware introduction	
Safety precautions	
Prerequisites	

Hardware introduction

This TW-EAV510 AC Router supports Ethernet-over-TW-EAV510 AC using one Ethernet data link that is rated up to 1000Mb/s symmetrically. With its bridge functionality, it connects any device equipped with a 10/100/1000BASE-TX network interface card with a standard telephone cable to a TW-EAV510 AC switch. For this purpose, it provides:

- One xDSL port
- Two USB port
- Four Ethernet LAN port
- One Ethernet WAN port

The TW-EAV510 AC Router also includes router functionality.

Safety precautions

Follow these recommendations to protect yourself and the TW-EAV510 AC Router from harm:

- Use volume labels to mark the type of power.
- Use the power adapter provided with the TW-EAV510 AC Router.
- Pay attention to the power load of the electrical outlet or extension cord. An overburdened power outlet or damaged cords and plugs may cause electric shock or fire. Check the power cords regularly. If you find any damage, replace the cord immediately.
- Leave adequate space for heat dissipation to avoid any damage caused by overheating the TW-EAV510 AC Router. Do not cover the ventilation holes.
- Do not put the TW-EAV510 AC Router near a heat source. Avoid placing the TW-EAV510 AC Router in direct sunlight.
- Do not put the TW-EAV510 AC Router in damp or wet locations. Do not spill any liquid on the TW-EAV510 AC Router.
- Do not place the TW-EAV510 AC Router on an unstable surface or support.
- Do not place heavy objects on top of the TW-EAV510 AC Router.
- Do not use liquid or aerosol cleaners; use a soft, dry cloth for cleaning.

Prerequisites

Ensure that you have the following items before attempting to use the TW-EAV510 AC Router:

- Internet services subscription (connection type, account information, and addresses)
- 10/100/1000Base-T Ethernet NIC installed in your PC
- Operating system: Windows 95, Windows 98, Windows 2000, Windows NT, Windows ME, Windows XP, Windows Vista, Windows 7, Windows 8 ,Mac OS, Linux, Unix, Windows RT, Android device, Ipad, Iphone, Windows Phone and all standard Wifi ot Ethernet based Internet devices with any suitaple Ooperating system for Internet usage.
- Internet Explorer 9.0 or higher.It also supports latest staple release of Mozilla Firefox, Safari, and Chrome.
-

Description of LEDs and interfaces

TW-EAV510 AC Router may support following interface

⊖ Power Interface(x1): 12V DC, 2.0A;
⊜ Power switch(x1): To turn on or turn off the power;
⊛ USB interface(x2): USB 2.0 host only;
④ Ethernet Interface(x5): To be connected to a PC network card by a network cable, also can use a crossover cable to connect to Hub, Switch or Router.
wireless network card, --WLAN: Enable or Disable Wi-Fi
⑥ Reset Key(x1): Reset default configuration.
⑦ Line Interface(x1): Connected with phone line or "VDSL" port of the splitter.

LED Status Indication

Power	On	Solid Green
	Off	Off
	Red	Power on self-test/ Device Malfunction (not bootable) and device malfunction
DSL	Green	DSL Good Sync
	Off	Powered off
	Flashing Green	DSL Attempting sync
		Signal Detection – Flashing 2hz with 50% duty cycle
		Carrier Detected, Modem training – Flashing at 4hz with 50% duty cycle
Internet	Off	IP or PPPOE session is idle and dropped, or DSL not connected
	Solid Green	Device has a public IP via either static/ DHCP/ or IPCP
	Solid Red	PPP didn't get authenticated
	Flashing Green	IP connected and traffic passing
WAN	Off	Power Off – or – No Device Detected
	Solid Green	Device connected including wake on WAN
	Flashing Green	WAN activity present for that port
LAN 1-4	Off	Power Off – or – No Device Detected
	Solid Green	Device connected including wake on LAN
	Flashing Green	LAN activity present for that port
Wireless	Green	Wireless is activated on modem
	Flashing Green	Wireless activity is present
	Off	Modem off or no device attached
WPS	Green	Have connected the wireless network card
	Flashing Green	WPS function is working
	Off	Modem off or no device attached
USB1-2	Green	USB activated on modem
	Flashing Green	Data is transmission
	Off	Modem off or no device attached

2 Hardware installation

Overview

Purpose

This chapter provides instructions to install the TW-EAV510 AC Router hardware.

Contents

This chapter covers the following topics:

To install the TW-EAV510 AC Router	

To install the TW-EAV510 AC Router

Supplies

- TW-EAV510 AC Router
- RJ-11 telephone cable
- RJ-45 category 5 Ethernet cable
- Splitter
- Power adapter
- User manual on CD-ROM
- Quick Installation Guide

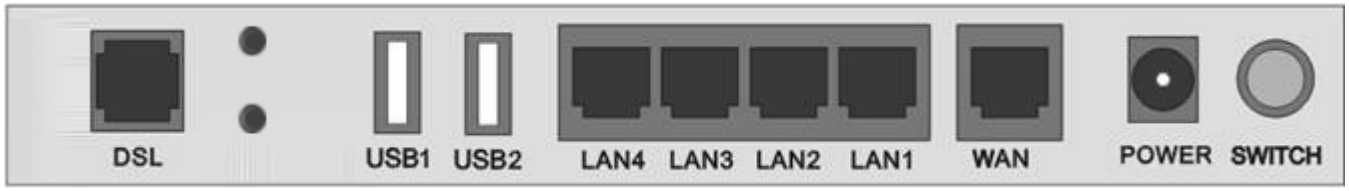
Before you begin

Warning Potential equipment damage and personal harm

Before installing the TW-EAV510 AC Router, ensure you have thoroughly read the Safety precautions and Prerequisites in chapter 1.

Turn off all devices (computer, hub, TW-EAV510 AC Router) before beginning this procedure.

Figure 2-1 Cable connections



Procedure

1. Connect the power adapter jack into the power socket on the TW-EAV510 AC Router and plug the power adapter plug into an outlet.
2. Connect one end of the RJ-11 cable into the DSL port on the TW-EAV510 AC Router.
3. Connect one end of the RJ-45 Ethernet cable to the Ethernet LAN port on the TW-EAV510 AC Router and the other end to your Ethernet PC (or LAN hub if you are setting up an intranet).
4. Turn the power switch on.

END OF STEPS

You must also configure the Internet properties on your Ethernet PC; see the TCP/IP configuration or *Quick Installation Guide* for detailed instructions.

After setting up the TW-EAV510 AC Router and your PC(s), you can access the web configuration tool.

3 Accessing the TW-EAV510 AC Router web configuration tool

Overview

Purpose

This chapter explains how to access the TW-EAV510 AC Router web configuration tool. The management interface software is HTML-based and can be accessed using a web browser.

Contents

This chapter covers the following topic:

To access the TW-EAV510 AC Router web configuration tool	

To access the TW-EAV510 AC Router web configuration tool

When to use

Use this procedure to access the web configuration interface of the TW-EAV510 AC Router. The configuration interface enables you to secure the TW-EAV510 AC Router, limit access, set traffic routes, modify passwords, and change advanced settings.

Before you begin

Before you can configure the TW-EAV510 AC Router, it must be installed, connected to a web-enabled PC, and turned on.

Note: For first-time configuration, connect the Ethernet cable from your computer to the LAN port on the TW-EAV510 AC Router. The default settings assign an IP subnet and an IP address.

Management IP settings

To establish the initial connection, either use a computer configured to be a DHCP client, or use a computer with IP settings in the 192.168.0.0 subnet. The default IP address of the TW-EAV510 AC Router for the first LAN port is 192.168.0.254 with a subnet 255.255.255.0.

Note: If you are not sure how to configure your computer to be a DHCP client or to set your IP address and subnet mask, see the TCP/IP configuration appendix or the *Quick Installation Guide*.

Procedure

1 Open a web browser and enter the IP address of the TW-EAV510 AC Router in the address bar:

http://192.168.0.254

The login window appears; see Figure 3-1.

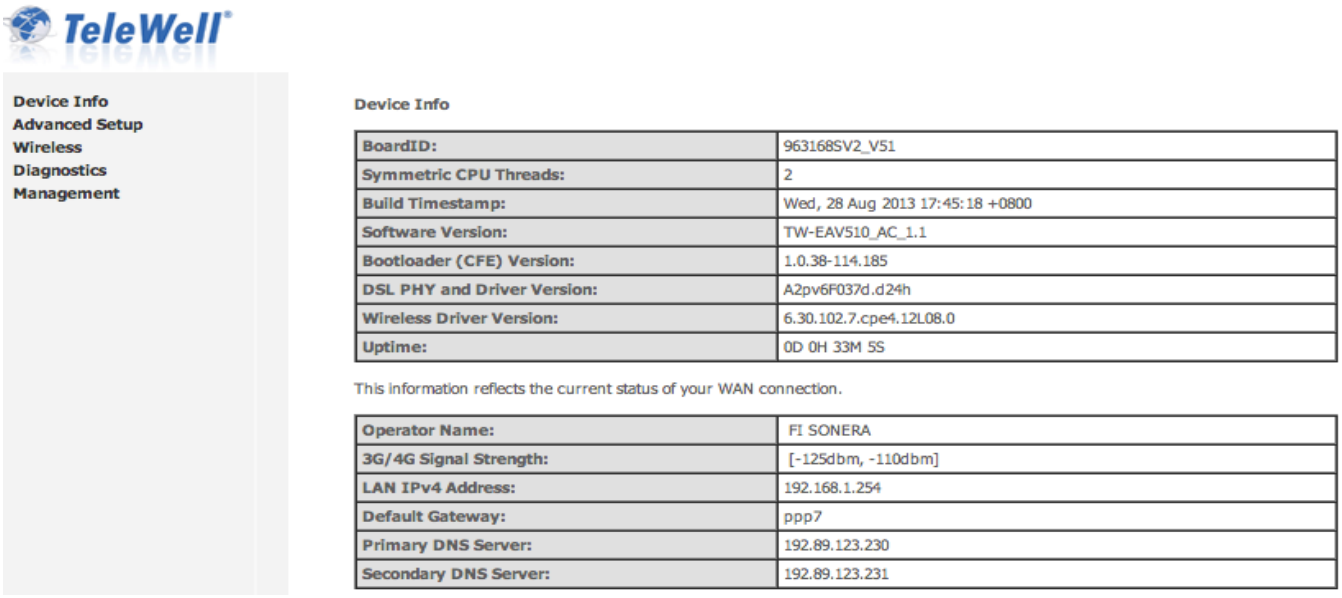
Figure 3-1 Login window

2 Enter your username and password and click **OK**.

Note: The default admin username is **admin** and the default admin password is **admin**.

The Device Info home page opens; see Figure 3-2.

Figure 3-2 Device Info home page



END OF STEPS

Configuration menus

All configuration and management of the TW-EAV510 AC Router is done using the web configuration tool. Click on the **Device Info**, **Advanced Setup, Wireless, Diagnostics**, and **Management** menu items to view the configuration menus.

4 Device Info

Overview

Purpose

This chapter explains the Device Info windows of the TW-EAV510 AC Router.

Click **Device Info** in the main menu to open the Device Info menu.

Contents

This chapter covers the following topics:

Summary	
WAN	
Statistics	
Route	
ARP	
DHCP	

Summary

The Device Info window displays a summary of the general information about the TW-EAV510 AC Router such as the model name, software version, and addresses.

Click **Summary** in the main menu to open the Device Info window; see Figure 4-1.

Figure 4-1 Device Info window

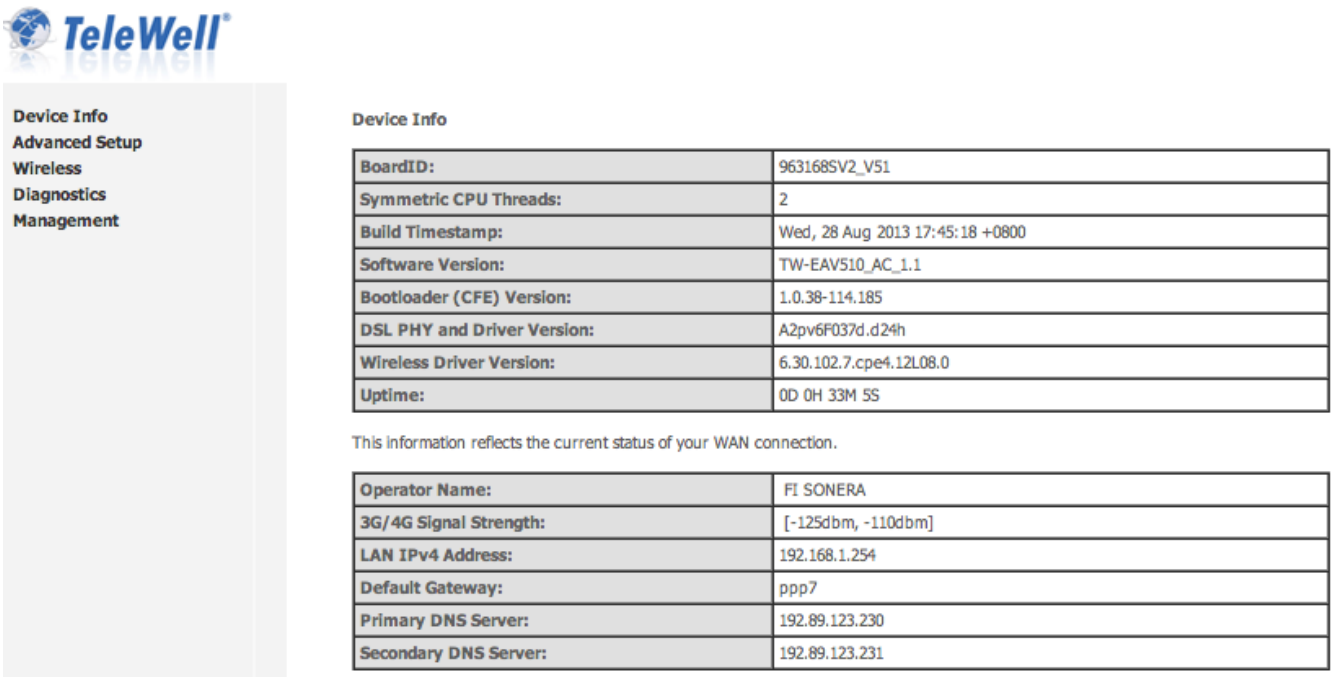


Table 4-2 describes the fields of the Device Info window.

Table 4-2 Field descriptions

Field	Description
Board ID (read-only)	The board ID of the gateway.
Software Version (read-only)	The current version of the software.
Bootloader (CFE) Version (read-only)	The current version of the boot loader program.
DSL PHY and Driver Version	The current version of dsl phy driver
Wireless Driver Version(read-only)	The current version of the wireless driver.

Field	Description
Uptime	The time since powering on
Line Rate – Upstream (Kbps) (read-only)	The upstream line rate of the gateway.
Line Rate – Downstream (Kbps) (read-only)	The downstream line rate of the gateway.
LAN IPv4 Address (read-only)	The IPv4 address of the LAN.
Default Gateway (read-only)	The IP address of the default gateway.
Primary DNS Server (read-only)	The Primary DNS ip address ofwan
Secondary DNS Server (read-only)	The Secondary DNS ip address of wan

WAN

The WAN Info window displays a list of the configured interfaces of the WAN.

Click **WAN** in the Device Info menu to open the WAN Info window; see Figure 4-3.

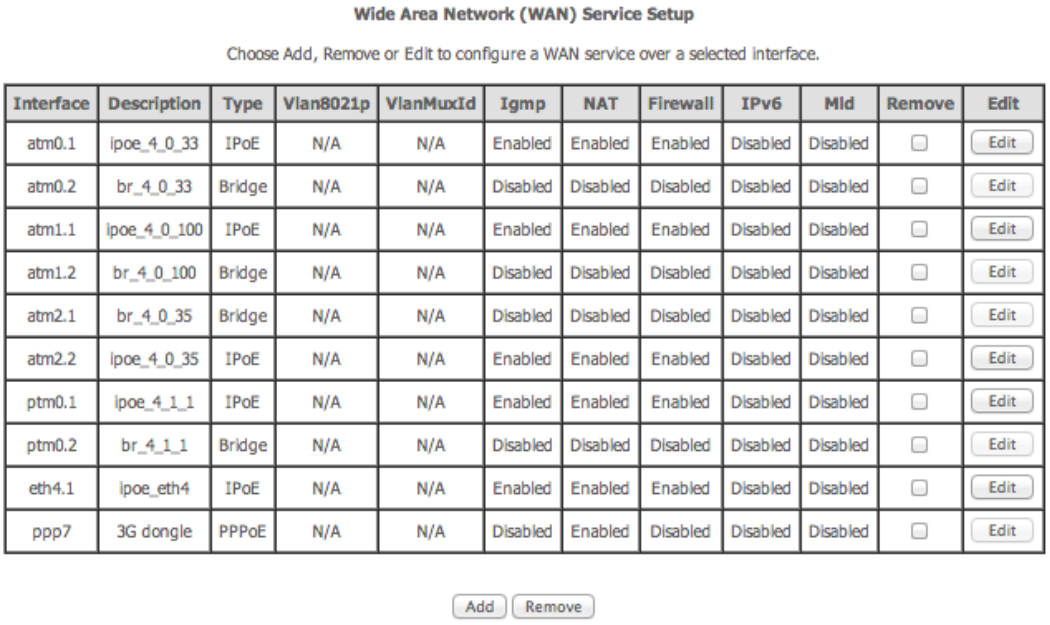


Figure 4-3 WAN window

Table 4-4 describes the fields of the WAN Info window.

Table 4-4 Field descriptions

Field	Description
Interface (read-only)	The WAN service.
Description (read-only)	The WAN service mode.
Type (read-only)	The WAN service connection type.
VlanMuxid (read-only)	The VLAN ID of the WAN service.
Igmp (read-only)	Indicates if IGMP multicast is enabled or disabled.
NAT (read-only)	Indicates if NAT is enabled or disabled.
Firewall (read-only)	Indicates if the firewall is enabled or disabled.
Status (read-only)	Indicates the current status of the WAN service.
IPv4 Address (read-only)	The IPv4 address of the WAN service.

Statistics

The **Statistics** menu contains statistical information about the LAN, WAN service, xTM, and TW-EAV510 AC interfaces.

Select **Statistics** in the **Device Info** menu to open the Statistics submenu.

LAN

The LAN window displays the statistics for the information received and transmitted over the LAN interface.

Click **LAN** in the **Statistics** submenu to open the LAN window; see Figure 4-5.

Figure 4-5 Statistics window

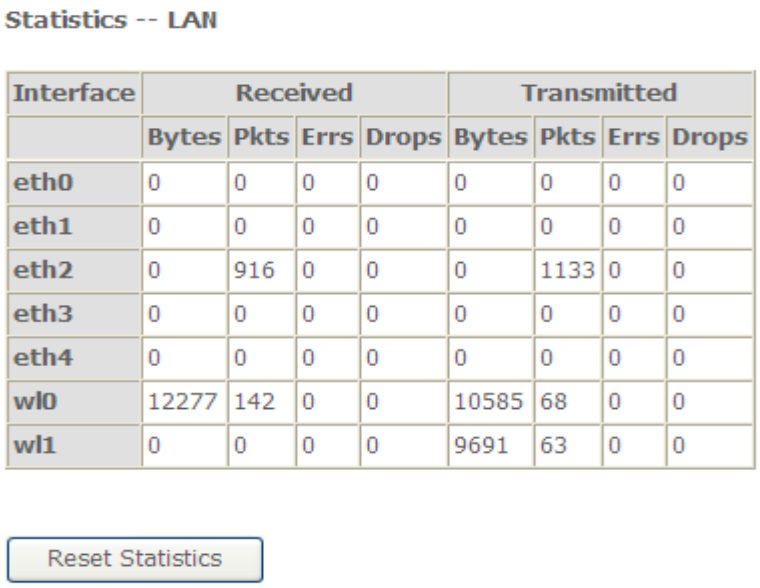


Table 4-6 describes the fields of the LAN window.

Table 4-6 Field descriptions

Field	Description
Interface (read-only)	The LAN interface.
Received (read-only)	Shows the number of: • **Bytes** received. • Packets (**Pkts**) received. • Errors (**Errs**) received. • Packets dropped (**Drops**).
Transmitted (read-only)	Shows the number of: • **Bytes** transmitted. • Packets (**Pkts**) transmitted. • Errors (**Errs**) transmitted. • Packets dropped (**Drops**).
Reset Statistics	Click to reset the statistics table.

WAN Service

The WAN window displays the statistics for the information received and transmitted over the WAN interface.

Click **WAN Service** in the **Statistics** submenu to open the WAN window; see Figure 4-7.

Figure 4-7 WAN window

WAN Info

Interface	Description	Type	VlanMuxId	IPv6	Igmp	MLD	NAT	Firewall	Status	IPv4 Address	IPv6 Address
atm0.1	ipoe_4_0_33	IPoE	Disabled	Disabled	Enabled	Disabled	Enabled	Enabled	Unconfigured	0.0.0.0	(null)
atm0.2	br_4_0_33	Bridge	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Unconfigured	0.0.0.0	(null)
atm1.1	ipoe_4_0_100	IPoE	Disabled	Disabled	Enabled	Disabled	Enabled	Enabled	Unconfigured	0.0.0.0	(null)
atm1.2	br_4_0_100	Bridge	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Unconfigured	0.0.0.0	(null)
atm2.1	br_4_0_35	Bridge	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Unconfigured	0.0.0.0	(null)
atm2.2	ipoe_4_0_35	IPoE	Disabled	Disabled	Enabled	Disabled	Enabled	Enabled	Unconfigured	0.0.0.0	(null)
ptm0.1	ipoe_4_1_1	IPoE	Disabled	Disabled	Enabled	Disabled	Enabled	Enabled	Unconfigured	0.0.0.0	(null)
ptm0.2	br_4_1_1	Bridge	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Unconfigured	0.0.0.0	(null)
eth4.1	ipoe_eth4	IPoE	Disabled	Disabled	Enabled	Disabled	Enabled	Enabled	Unconfigured	0.0.0.0	(null)
eth5	3G dongle	IPoE	Disabled	Disabled	Disabled	Disabled	Enabled	Enabled	Disconnected	0.0.0.0	(null)
ppp7	3G dongle	PPPoE	Disabled	Disabled	Disabled	Disabled	Enabled	Disabled	Connected	10.56.179.136	(null)

Table 4-8 describes the fields of the WAN window.

Table 4-8 Field descriptions

Field	Description
Interface (read-only)	The WAN interface.
Description (read-only)	The description of the WAN interface.
Received (read-only)	Shows the number of: • **Bytes** received. • Packets (**Pkts**) received. • Errors (**Errs**) received. • Packets dropped (**Drops**).
Transmitted (read-only)	Shows the number of: • **Bytes** transmitted. • Packets (**Pkts**) transmitted. • Errors (**Errs**) transmitted.

Field	Description
	• Packets dropped (**Drops**).
Reset Statistics	Click to reset the statistics table.

xTM

The xTM window displays ATM and PTM (VDSL2) statistics.

Click **xTM** in the **Statistics** submenu to open the xTM window; see Figure 4-9.

Figure 4-9 xTM window

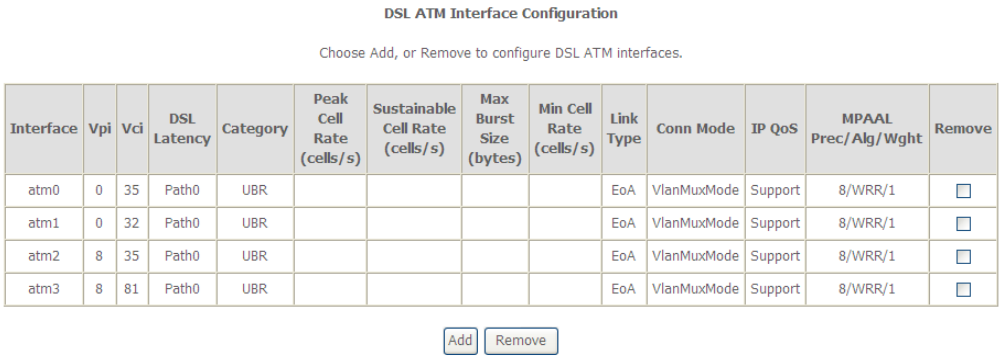


Table 4-10 describes the fields of the xTM window.

Table 4-10 Field descriptions

Field	Descriptions
Port Number (read-only)	The port number.
In Octets (read-only)	The number of octets in.
Out Octets (read-only)	The number of octets out.
In Packets (read-only)	The number of packets received.
Out Packets (read-only)	The number of packets sent.
In OAM Calls (read-only)	The number of OAM calls received.
Out OAM Calls (read-only)	The number of outgoing OAM calls.
In ASM Calls (read-only)	The number of ASM calls received.
Out ASM Calls (read-only)	The number of outgoing ASM calls.
In Packet Errors (read-only)	The number of errors received.
Out Packet Errors (read-only)	The number of errors transmitted.

Field	Descriptions
Reset	Click to reset the statistics table.

TW-EAV510 AC

The TW-EAV510 AC window displays the statistics for the TW-EAV510 AC.

Click **TW-EAV510 AC** in the **Statistics** submenu to open the TW-EAV510 AC window; see Figure 4-11.

Figure 4-11 TW-EAV510 AC window

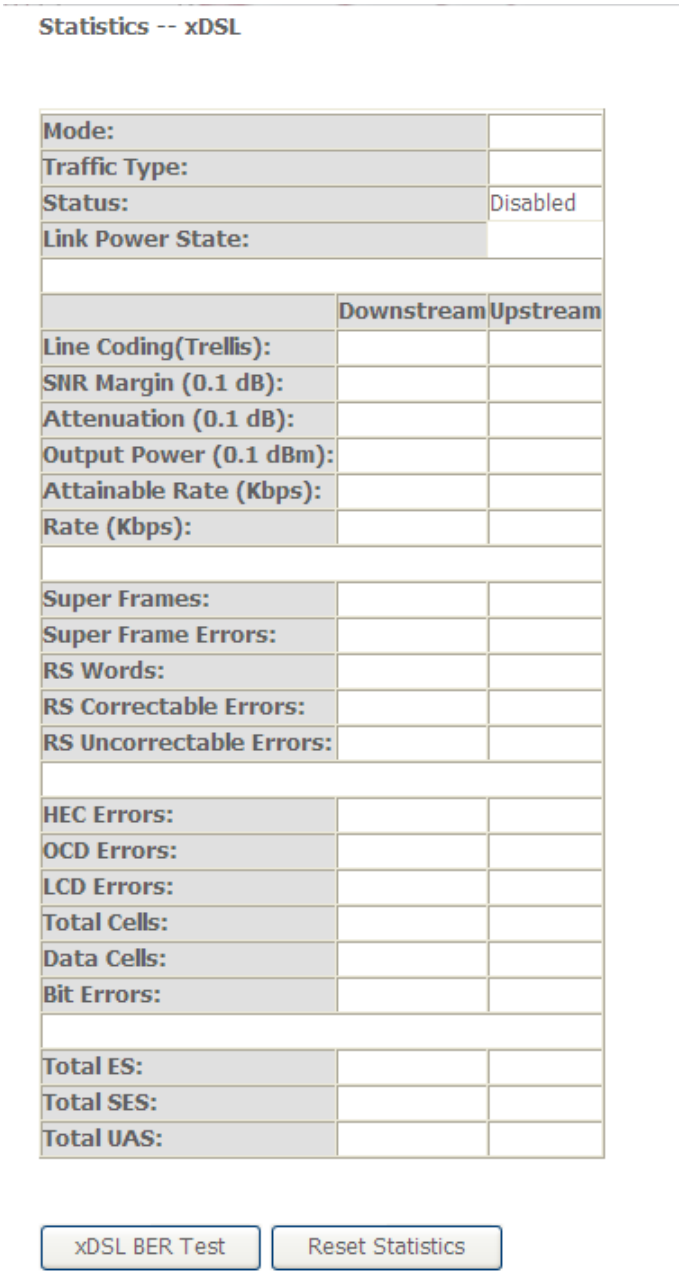


Table 4-12 describes the fields of the TW-EAV510 AC window.

Table 4-12 Field Descriptions

Field	Description
Mode (read-only)	The TW-EAV510 AC mode.
Traffic Type (read-only)	The traffic type.
Status (read-only)	The status of the TW-EAV510 AC.
Link Power State (read-only)	The link power state.
Line Coding (read-only)	The downstream and upstream line coding.
SNR Margin (0.1 dB) (read-only)	The downstream and upstream SNR margin.
Attenuation (0.1 dB) (read-only)	The downstream and upstream attenuation.
Output Power (0.1 dBm) (read-only)	The downstream and upstream output power.
Attainable Rate (Kbps) (read-only)	The downstream and upstream attainable rate.
Rate (Kbps) (read-only)	The downstream and upstream rate.
Super Frames (read-only)	The number of downstream and upstream super frames.
Super Frame Error (read-only)	The number of downstream and upstream super frame errors.
RS Words (read-only)	The number of downstream and upstream RS words.
RS Correctable Errors (read-only)	The number of downstream and upstream RS correctable errors.
RS Uncorrectable Errors (read-only)	The number of downstream and upstream RS non-correctable errors.
HEC Errors (read-only)	The number of downstream and upstream HEC errors.
OCD Errors (read-only)	The number of downstream and upstream OCD errors.

Field	Description
LCD Errors (read-only)	The number of downstream and upstream LCD errors.
Total Cells (read-only)	The total number of downstream and upstream cells.
Data Cells (read-only)	The number of downstream and upstream data cells.
Bit Errors (read-only)	The number of downstream and upstream Bit errors.
Total ES (read-only)	The total number of downstream and upstream errored seconds.
Total SES (read-only)	The total number of downstream and upstream errored seconds.
Total UAS (read-only)	The total number of downstream and upstream UAS.
TW-EAV510 AC BER Test	Click to run TW-EAV510 AC bit error rate test.
Reset Statistics	Click to reset the statistics table.

Route

The Route window displays the route status information.

Click **Route** in the Device Info menu to open the Route window; see Figure 4-13.

Figure 4-13 Route window

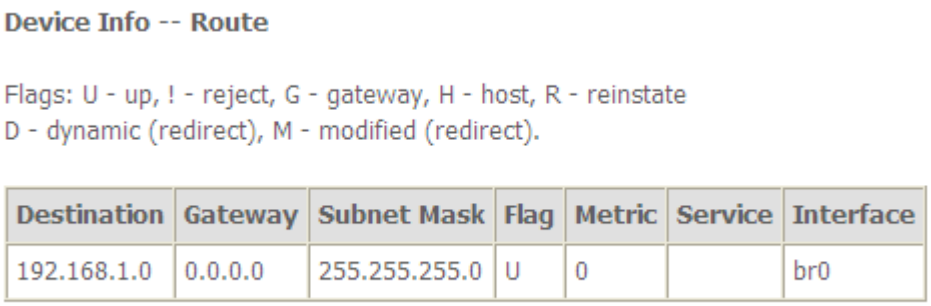


Table 4-14 describes the fields of the Route window.

Table 4-14 Field descriptions

Field	Description
Destination (read-only)	The destination IP address of the route.
Gateway (read-only)	The gateway used by the route.
Subnet Mask (read-only)	The subnet mask of the destination.
Flag (read-only)	The status of the route.
Metric (read-only)	The number of hops during the route.
Service (read-only)	The service name of the routing mode.
Interface (read-only)	The interface using the route.

ARP

The ARP window displays the MAC and IP address information of the equipment attached to the TW-EAV510 AC Router. Click **ARP** in the **Device Info** menu to open the ARP window; see Figure 4-15.

Figure 4-15 ARP window

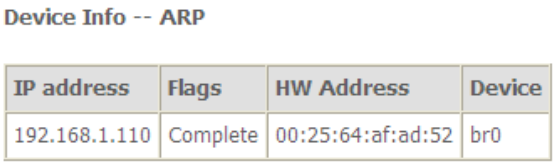


Table 4-16 describes the fields of the ARP window.

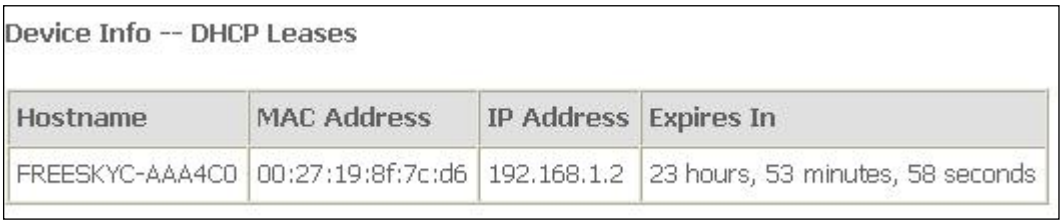
Table 4-16 Field descriptions

Field	Description
IP address (read-only)	The IP address of the device connected to the LAN port.
Flags (read-only)	The status of the information of the device connected to the LAN port.
HW Address (read-only)	The HW address.

Field	Description
Device (read-only)	The port used by the ARP.

DHCP

To access the Device Info – DHCP Leases window, click the DHCP button in the device Info directory. This read-only window displays DHCP lease info.



5 Advanced Setup

Overview

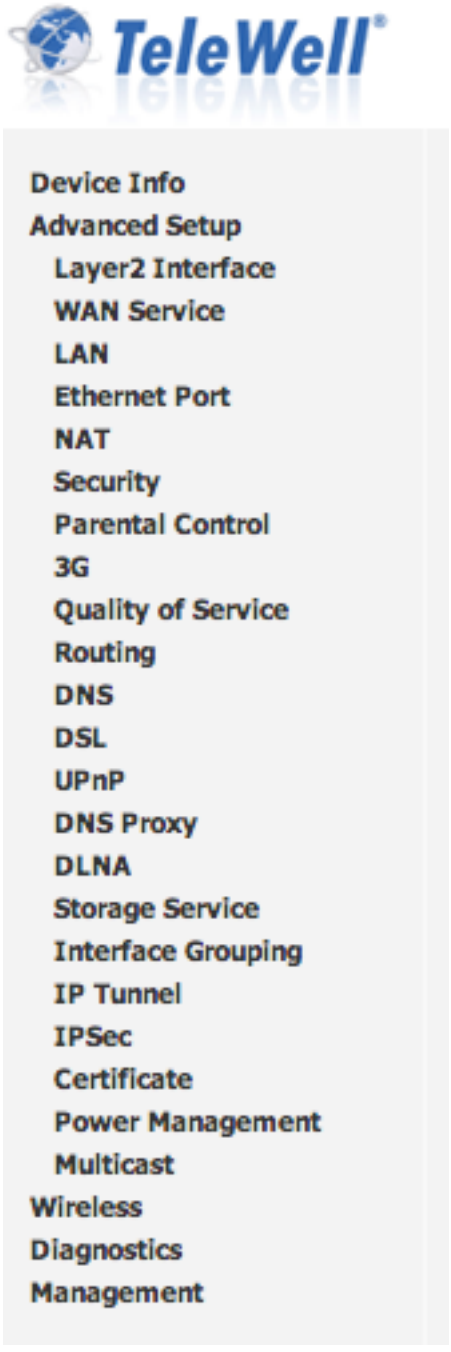
Purpose

This chapter explains the Advanced Setup of the TW-EAV510 AC Router.

Click **Advanced Setup** in the main menu to open the Advanced Setup menu.

Contents

This chapter covers the following topics:



Layer2 Interface

The Layer2 Interface menu enables you to select the type of Layer 2 Interface.

Select **Layer2 Interface** from the **Advanced Setup** menu to open the Layer2 Interface submenu.

ATM Interface

The DSL ATM Interface Configuration window enables you to add, delete, or modify up to eight ATM Layer 2 interface connections.

Note: ATM works in VDSL or ADSL mode.

Click **ATM Interface** in the Layer2 Interface menu to open the DSL ATM Interface Configuration window; see Figure 5-1.

Figure 5-1 DSL ATM Interface Configuration window

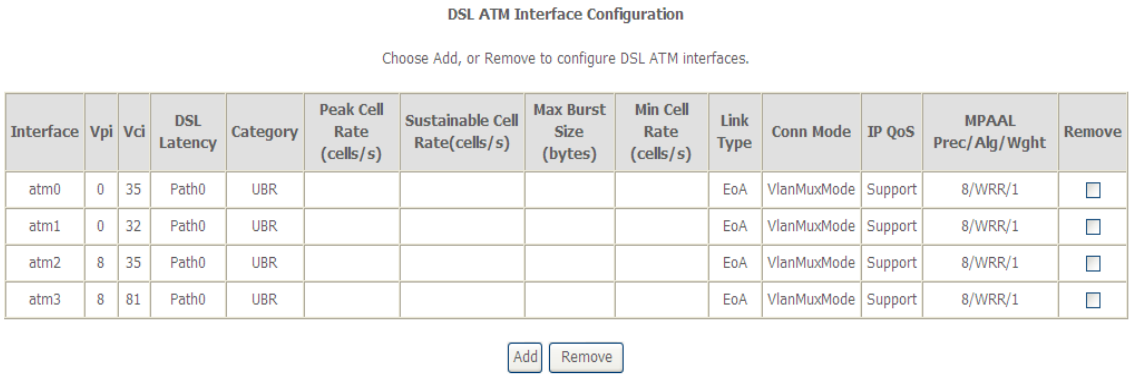


Table 5-2 describes the fields of the DSL ATM Interface Configuration window.

Table 5-2 Field descriptions

Field	Description
Interface (read-only)	The number of the ATM interface.
VPI (read-only)	The VPI value assigned by your ISP.
VCI (read-only)	The VCI value assigned by your ISP.
DSL Latency (read-only)	The latency rate of the DSL. The latency is Path0.
Category (read-only)	The type of service category selected for the ATM interface. The options are: • **UBR** • **CBR** • **VBR**

Field	Description
Link Type (read-only)	The DSL link type selected for the ATM interface.
Connection Mode (read-only)	The connection mode selected for the ATM interface. The options are: • **Default Mode – Single service over one connection** • **VLAN MUX Mode – Multiple VLAN service over one connection** • **MSC Mode – Multiple service over one connection**
QoS (read-only)	Indicates if QoS rules are enabled or disabled for the connection.
Remove	Enable the check-box to remove the ATM interface to be removed.
Add	Click to add a connection. The ATM PVC Configuration window opens.
Remove	Click to remove a selected connection.

ATM PVC Configuration

If you have selected to add or modify an ATM interface connection, the ATM PVC Configuration window opens; see Figure 5-3.

Figure 5-3 ATM PVC Configuration window

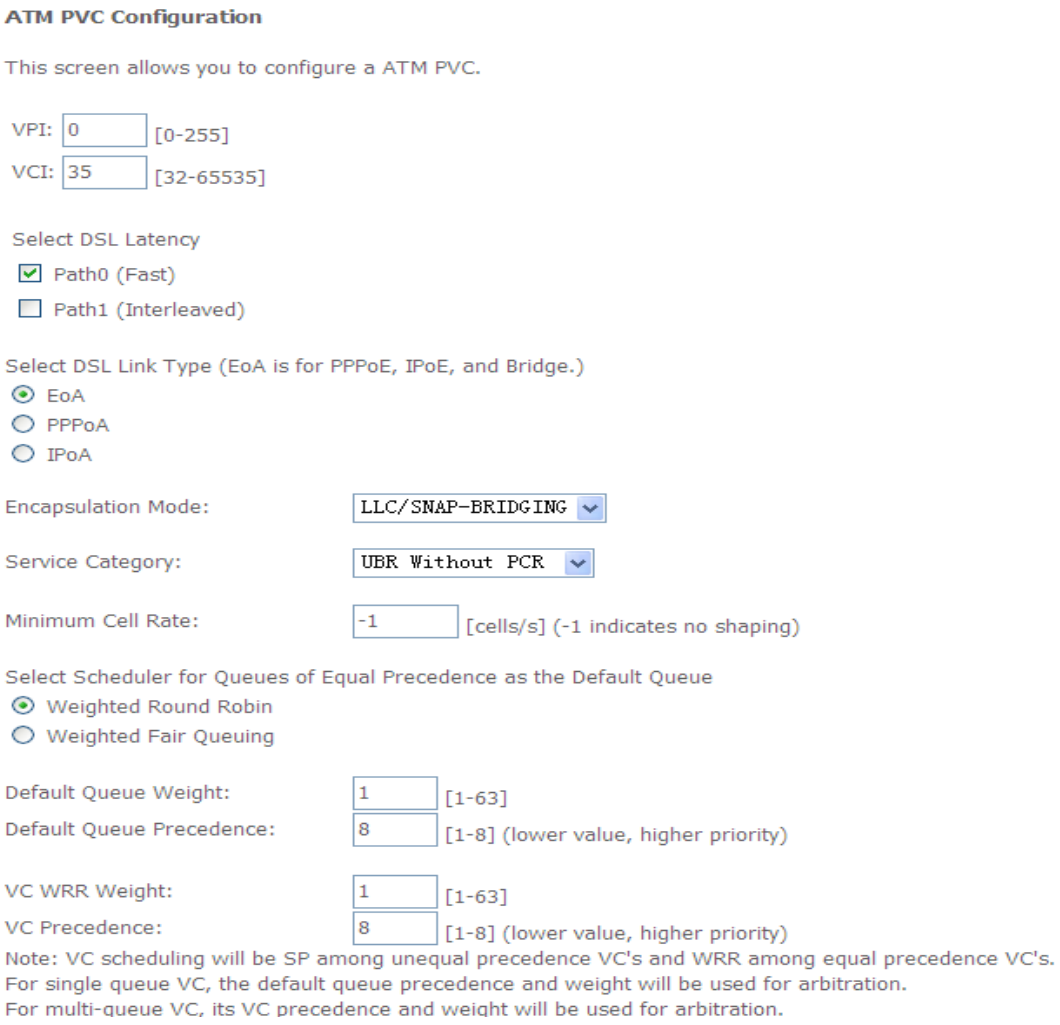


Table 5-4 describes the fields of the ATM PVC Configuration window.

Table 5-4 Field descriptions

Field	Description
VPI [0-255]	Enter a VPI value from 0 to 255. **Note:** The VPI value is provided by your ISP.
VCI [32-65535]	Enter a VCI value from 32 to 65535. **Note:** The VCI value is provided by your ISP.
Select DSL Link Type	Select one of the following: • **EoA** (Ethernet over ATM)

Field	Description
	• **PPPoA** (PPP over ATM) • **IPoA** (IP over ATM)
Encapsulation Mode	Select an encapsulation mode: • **LLC/SNAP-BRIDGING** • **VC/MUX**
Service Category	Select a service category: • **UBR without PCR** • **UBR with PCR** • **CBR** • **Non realtime VBR** • **Realtime VBR**
Select Connection Mode	Select a connection mode for the ATM interface: • **Default Mode – Single service over one connection** • **VLAN MUX Mode – Multiple VLAN service over one connection** • **MSC Mode – Multiple service over one connection**
Enable Quality of Service	Enable to apply QoS settings to the connection; see for details.
Back	Click to return to the previous window.
Apply/Save	Click to save changes.

DSL PTM (VDSL2) Interface Configuration

The DSL PTM (VDSL2) Interface Configuration window enables you to add, delete, or modify up to eight PTM (VDSL2) Layer 2 interface connections.

Note: PTM (VDSL2) only works in TW-EAV510 AC mode.

Note: You usually only need to configure one PTM (VDSL2) interface. Most ISPs provide only one PTM (VDSL2) interface.

Click **PTM (VDSL2) Interface** in the Layer2 Interface menu to open the DSL PTM (VDSL2) Interface Configuration window; see Figure 5-5.

Figure 5-5 DSL PTM (VDSL2) Interface Connection window

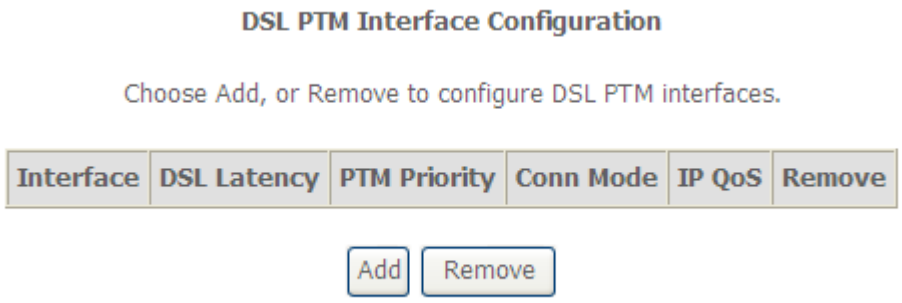


Table 5-6 describes the fields of the DSL PTM (VDSL2) Interface Configuration window.

Table 5-6 Field descriptions

Field	Description
Interface (read-only)	The number of the PTM (VDSL2) interface.
DSL Latency (read-only)	The latency rate of the DSL. The latency is Path0.
PTM (VDSL2) Priority (read-only)	The selected priority level of the PTM (VDSL2) interface.
Connection Mode (read-only)	The connection mode selected for the PTM (VDSL2) interface.
QoS (read-only)	Indicates if QoS rules are enabled or disabled for the connection.
Remove	Enable the check-box to remove the PTM (VDSL2) interface from the list.
Add	Click to add a connection. See PTM (VDSL2) Configuration for details.
Remove	Click to remove a selected connection.

PTM (VDSL2) Configuration

If you have selected to add or modify a PTM (VDSL2) interface connection, the PTM (VDSL2) Configuration window opens; see Figure 5-7.

Figure 5-7 PTM (VDSL2) Configuration window

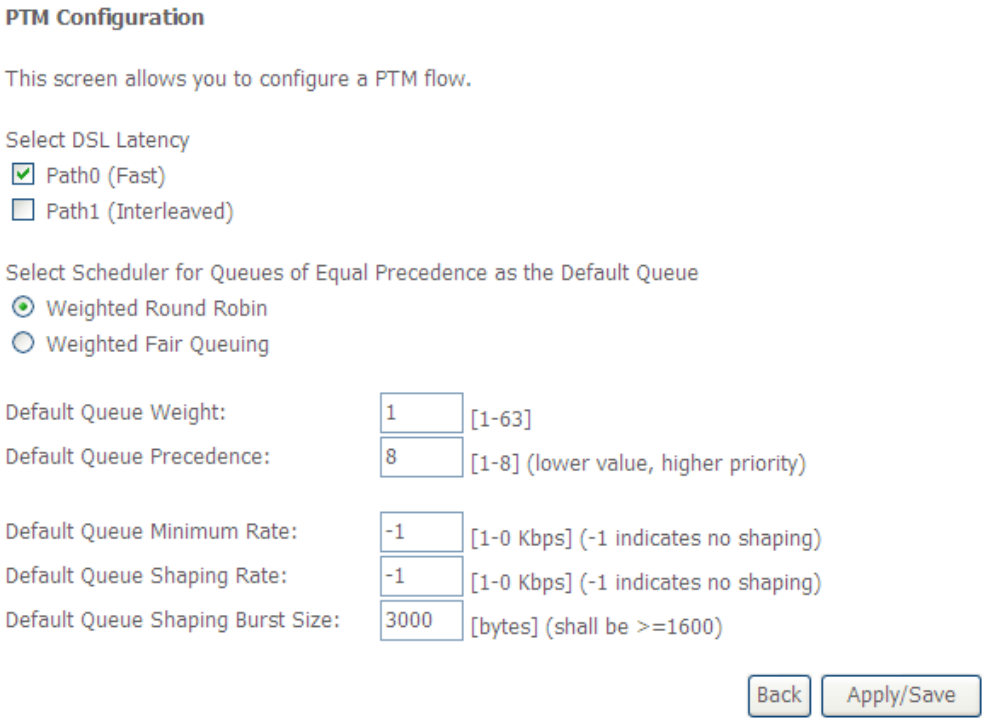


Table 5-8 describes the fields of the PTM (VDSL2) Interface Configuration window.

Table 5-8 Field descriptions

Field	Description
Select PTM (VDSL2) Priority	Select the PTM (VDSL2) priority level: • **Normal Priority** • **High Priority (Preemption)**
Select Connection Mode	Select a connection mode for the PTM (VDSL2) interface: • **Default Mode – Single service over one connection** • **VLAN MUX Mode – Multiple VLAN service over one connection** • **MSC Mode – Multiple service over one connection**
Enable Quality of Service	Enable to apply QoS rules to the connection; see for details.
Back	Click to return to the previous window.

Field	Description
Apply/Save	Click to save changes.

ETH Interface

The ETH WAN Interface Configuration window enables you to add, delete, or modify up to eight ETH WAN Layer 2 interface connections.

Note: Selecting ETH disables ATM and PTM (VDSL2) modes.

Note: If you want to remove the Layer 2 interface, you must remove the WAN interface base on this Layer 2 interface.

Click **ETH Interface** in the Layer2 Interface menu to open the ETH WAN Interface Configuration window; see Figure 5-9.

Figure 5-9 ETH WAN Interface Configuration window

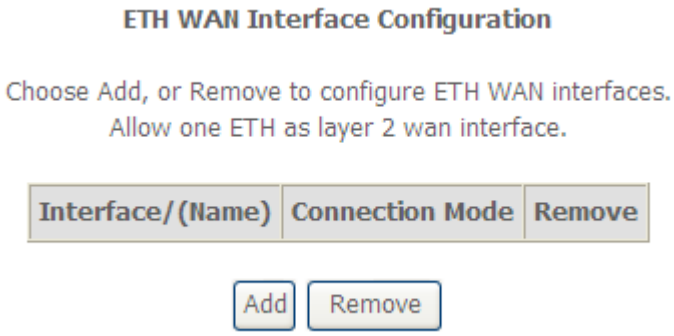


Table 5-10 describes the fields of the ETH WAN Interface Configuration window.

Table 5-10 Field descriptions

Field	Description
Interface/(Name) (read-only)	The number and name of the ETH interface.
Connection Mode (read-only)	The connection mode selected for the ETH interface.
Remove	Enable the check-box to remove the ETH interface from the list.
Add	Click to add a connection. See ETH WAN Configuration for details.
Remove	Click to remove a selected connection.

ETH WAN Configuration

If you have selected to add or modify an ETH interface connection, the ETH WAN Configuration window opens; see Figure 5-11.

Figure 5-11 ETH WAN Configuration window

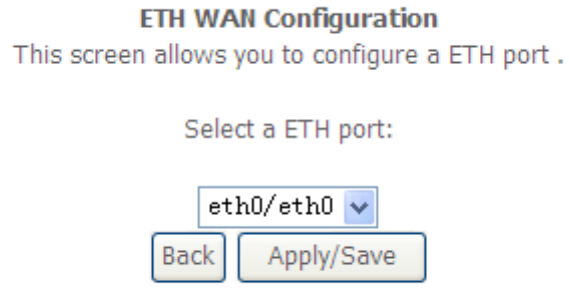


Table 5-12 describes the fields of the ETH WAN Configuration window.

Table 5-12 Field descriptions

Field	Description
Select a ETH port	Select an Ethernet port for the ETH WAN interface connection.
Back	Click to return to the previous window.
Apply/Save	Click to save changes.

WAN Service

If you have created a Layer2 interface, use WAN Service to configure the settings for a WAN service over a selected interface.

Note: ETH and PTM (VDSL2)/ATM service cannot exist.

Select **WAN Service** from the **Advanced Setup** menu to open the WAN Setup Service menu.

WAN Service Setup

The WAN Service Setup window enables you to add, delete, or modify WAN services over a selected interface; see Figure 5-13.

Figure 5-13 WAN Service Setup window

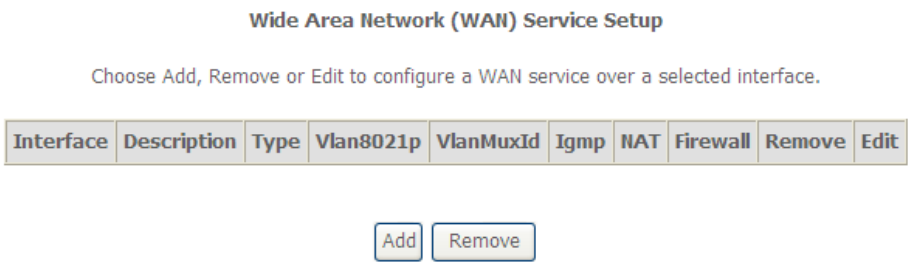


Table 5-14 describes the fields of the WAN Service Setup window.

Table 5-14 Field descriptions

Field	Description
Interface (read-only)	The WAN service.
Description (read-only)	The WAN service mode.
Type (read-only)	The WAN service connection type.
VLAN8021p (read-only)	The priority of the WAN service.
VLANMuxid (read-only)	The VLAN ID of the WAN service.
Connid (read-only)	The connection ID.
IGMP (read-only)	Indicates if IGMP multicast is enabled or disabled.
NAT (read-only)	Indicates if NAT is enabled or disabled.
Firewall (read-only)	Indicates if the firewall is enabled or disabled.
Remove	Enable the check-box to select the WAN service to be removed from the list.
Add	Click to add a service; the WAN Service Interface Configuration window opens.
Remove	Click to remove a selected service.

WAN Service Interface Configuration

The WAN Service Interface Configuration windows enable you to configure the WAN service.

Figure 5-15 WAN Service Interface Configuration window

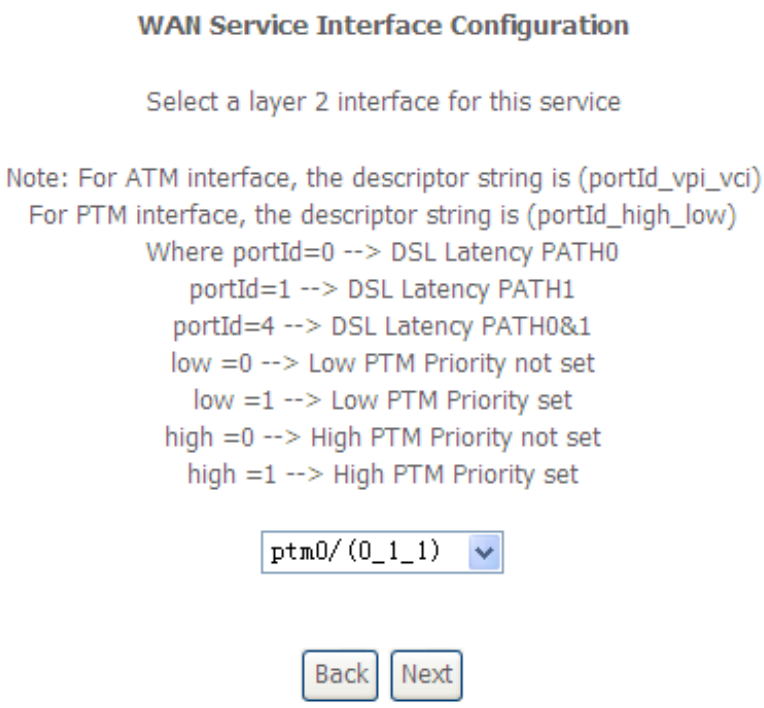


Table 5-16 describes the fields of the WAN Service Interface Configuration window.

Table 5-16 Field descriptions

Field	Description
Select a layer 2 interface for this service	Select a layer 2 interface for the service from the drop-down menu.
Back	Click to return to the previous window.
Next	Click to configure the settings for the service. See WAN Service Configuration for details.

When you have selected a layer 2 interface for the service and clicked **Next**, the WAN Service Configuration window opens; see Figure 5-17.

Note: You can only select PPPoE, IP over Ethernet, or Bridging if you have selected an EoA layer2 link type.

Figure 5-17 WAN Service Configuration window

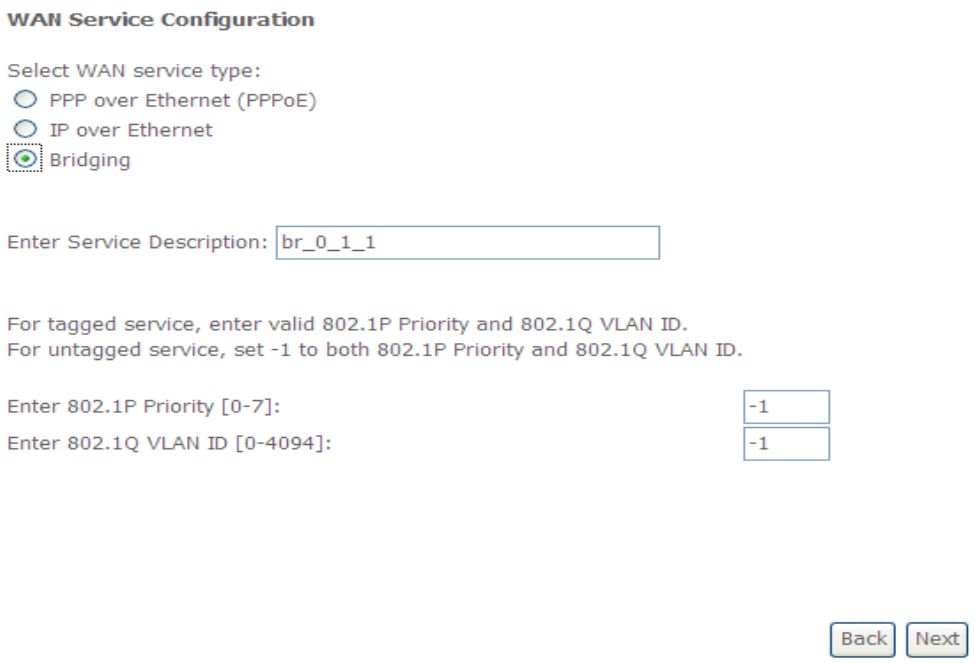


Table 5-18 describes the fields of the WAN Service Configuration window.

Table 5-18 Field descriptions

Field	Description
Select WAN service type	Select a service type for the WAN: • **PPP over Ethernet (PPPoE)** • **IP over Ethernet** • **Bridging**
Enter Service Description	Enter the service name.
Back	Click to return to the previous window.
Next	If you have selected PPPoE, click to open the PPP Username and Password window; see WAN PPPoE.

Field	Description
	If you have selected PPPoE, click to open the WAN IP Settings window; see WAN IP over Ethernet. If you have selected Bridging, click to open a summary of the WAN setup. See WAN Setup – Summary.

WAN PPPoE

If you select PPPoE as the WAN service type, the PPP Username and Password window opens; see Figure 5-29.

Figure 5-29 PPP Username and Password window

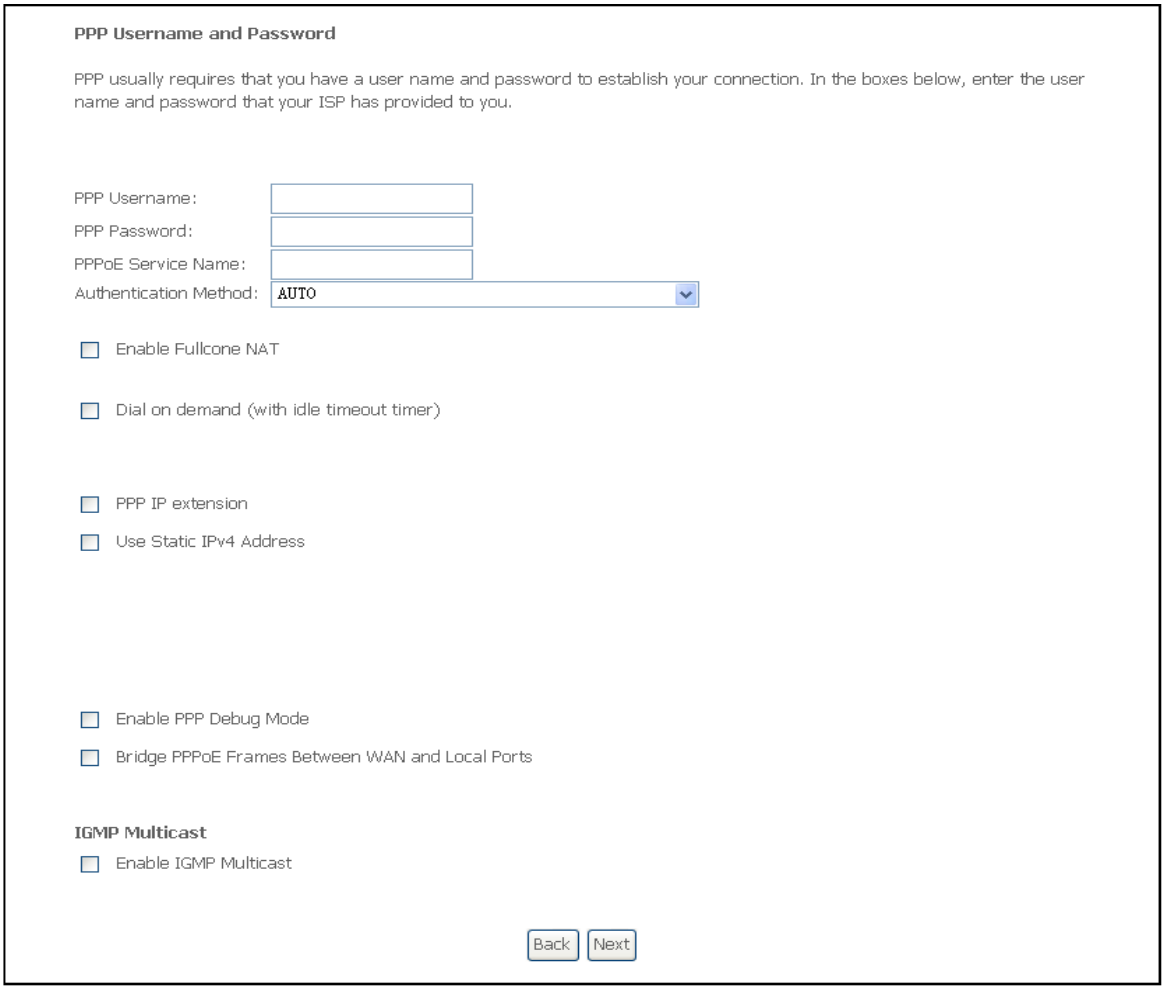
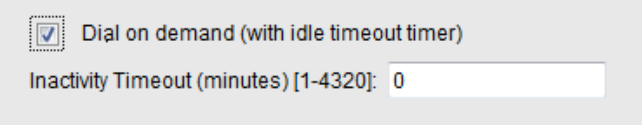
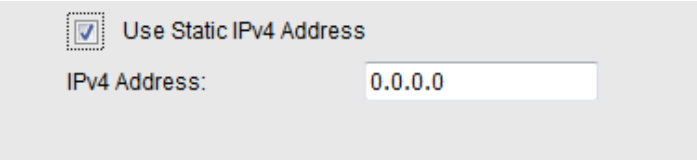


Table 5- describes the fields of the PPP Username and Password window.

Table 5-20 Field descriptions

Field	Description
PPP Username	Enter the PPP username.
PPP Password	Enter the PPP password.
PPPoE Service Name	Enter the service name of the network ISP.
Authentication Method	Select an authentication method: • **AUTO** • **PAP** • **CHAP** • **MSCHAP** The default is **AUTO**.
Enable Fullcone NAT	Enable to apply Fullcone NAT mode.
Dial on demand (with idle timeout timer) 	Enable to configure an amount of time that the connection can have no traffic before it automatically disconnects. In the **Inactivity Timeout** field, enter an amount of time between 1 and 4320 minutes that the connection can have no traffic before it automatically disconnects.
PPP IP extension	Enable to allow the gateway to use PPPoE to get the WAN IP and pass it along to the next device.
Use Static IPv4 Address 	Enable to use a static IPv4 address. Enter the address in the **IPv4 Address** field.
Enable PPP Debug Mode	Enable to have the gateway log the PPP debug information into the log.
Bridge PPPoE Frames Between WAN and Local Ports	If you have selected PPPoE mode, enable so that the third party dial-up software connection can still be used with the Internet.

Field	Description
Enable IGMP Multicast	Enable to support IGMP proxy.
Back	Click to return to previous window.
Next	Click to configure the default gateway. See Routing – Default Gateway for details.

WAN IP Settings

If you have selected IP over Ethernet as the WAN connection type, the WAN IP Settings window opens; see Figure 5-.

Figure 5-21 WAN IP Settings window

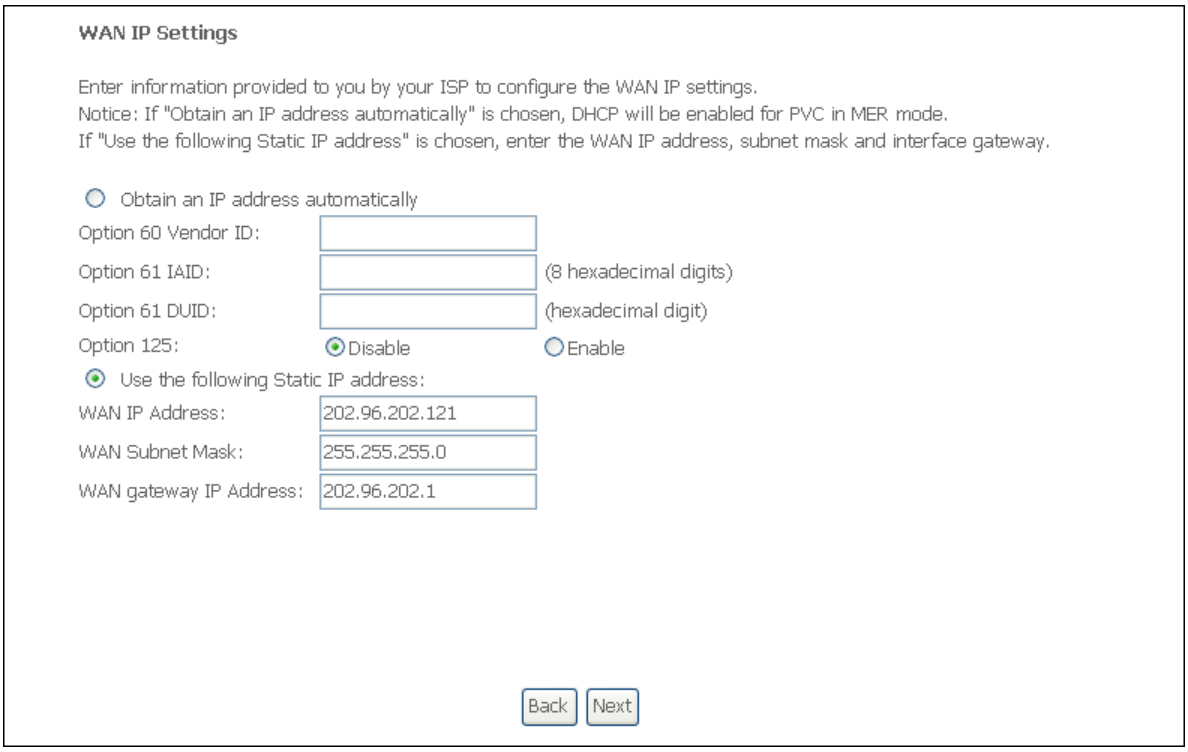


Table 5-22 describes the fields of the DNS Server Configuration window.

Table 5-22 Field descriptions

Field	Description
Obtain an IP address automatically	Select to obtain an IP address automatically for the WAN IP. DHCP will be enabled and for

Field	Description
	PVC in MER mode.
Option 60 Vendor ID	Contact your ISP for information.
Option 61 IAID	Contact your ISP for information.
Option 61 DUID	Contact your ISP for information.
Option 125	Contact your ISP for information.
Use the following Static IP address	Select to use a specified static IP address for the WAN IP.
WAN IP Address	Enter a static IP address.
WAN Subnet Mask	Enter a subnet mask.
WAN gateway IP Address	Enter the gateway IP address.
Back	Click to return to the previous window.
Next	Click to configure the default gateway; see Routing – Default Gateway.

Routing – Default Gateway

If you have configured the fields of the PPP Username and Password window or WAN IP Settings window and clicked **Next**, the Routing – Default Gateway window opens; see Figure 5-23.

Figure 5-23 Routing – Default Gateway window

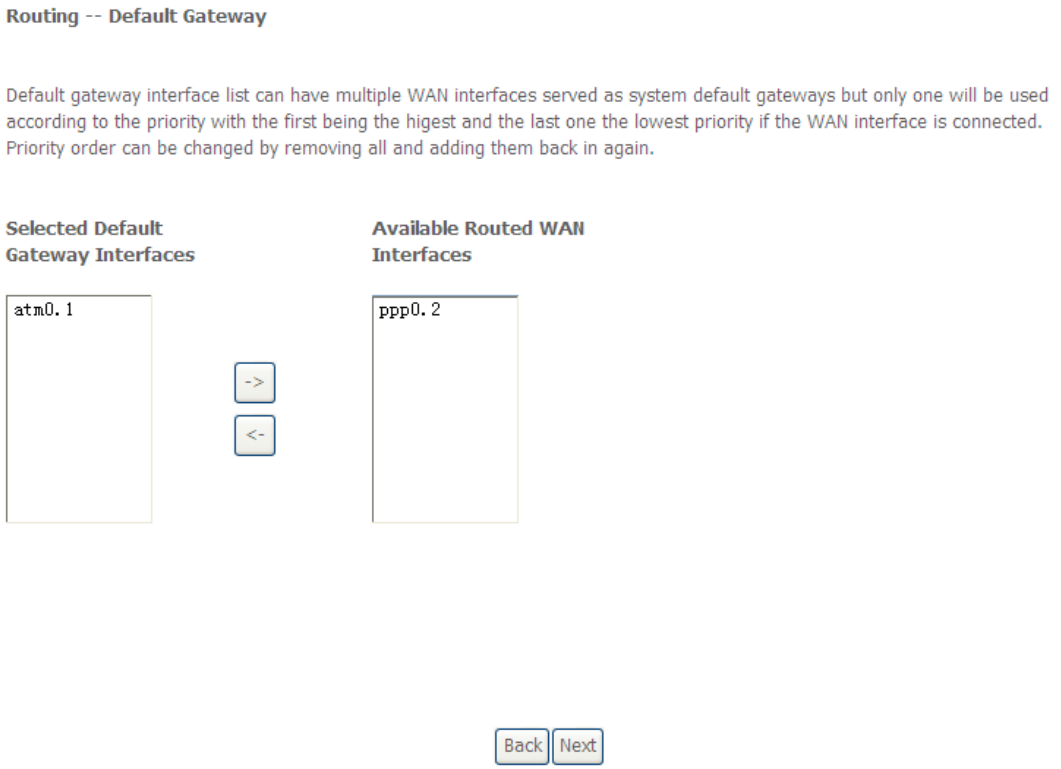


Table 5-24 describes the fields of the Routing – Default Gateway window.

Table 5-24 Field descriptions

Field	Description
Selected WAN Interface	Select a WAN interface from the drop-down menu.
Back	Click to return to the previous window.
Next	Click to open the DNS Configuration Server window. See DNS Server Configuration for details.

DNS Server Configuration

If you have configured the default gateway and clicked **Next**, the DNS Server Configuration window opens; see Figure 5-25.

Figure 5-25 DNS Server Configuration window

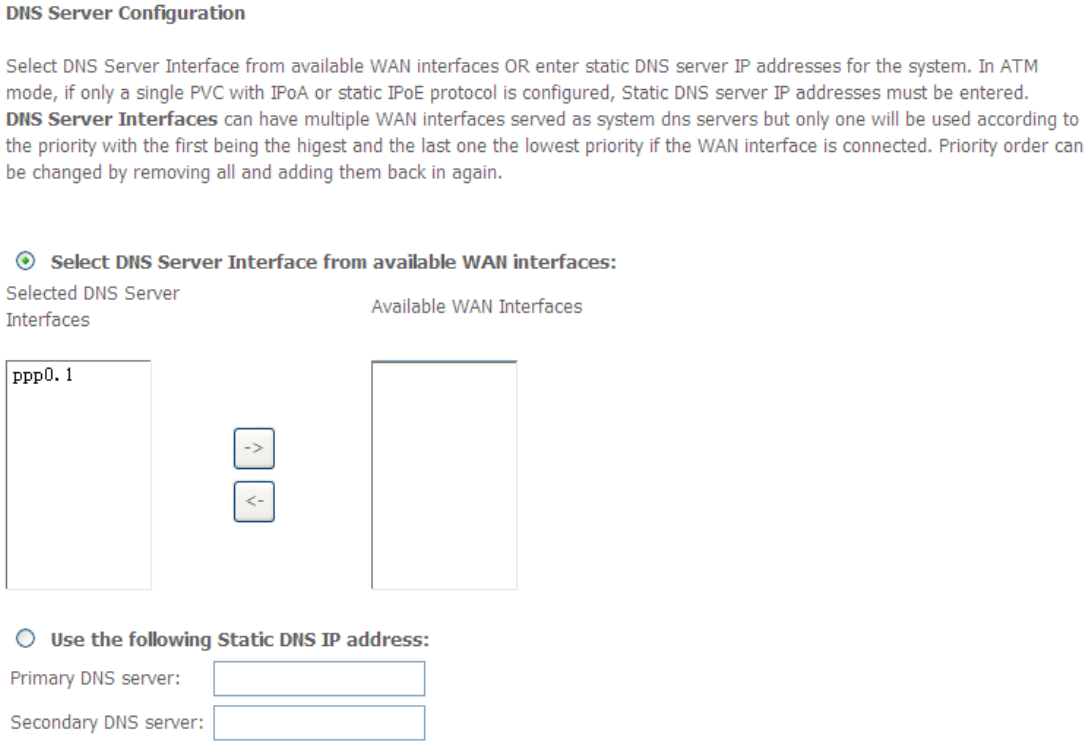


Table 5-26 describes the fields of the DNS Server Configuration window.

Table 5-26 Field descriptions

Field	Description
Obtain DNS info from a WAN interface	Select to obtain DNS server information from a specified WAN interface.
WAN Interface selected	Select a WAN interface to obtain the DNS server information of that interface.
Use the following Static DNS IP address	Select to enter a static DNS server IP address.
Primary DNS server	Enter the IP address of the primary DNS server.
Secondary DNS server	Enter the IP address of a secondary DNS server.
Apply/Save Changes	Click to save changes and view a summary of the WAN settings; see WAN Setup – Summary.

WAN Setup – Summary

If you have configured the WAN service and clicked **Next**, the WAN Setup – Summary window opens; see Figure 5-27.

Figure 5-27 WAN Setup – Summary window

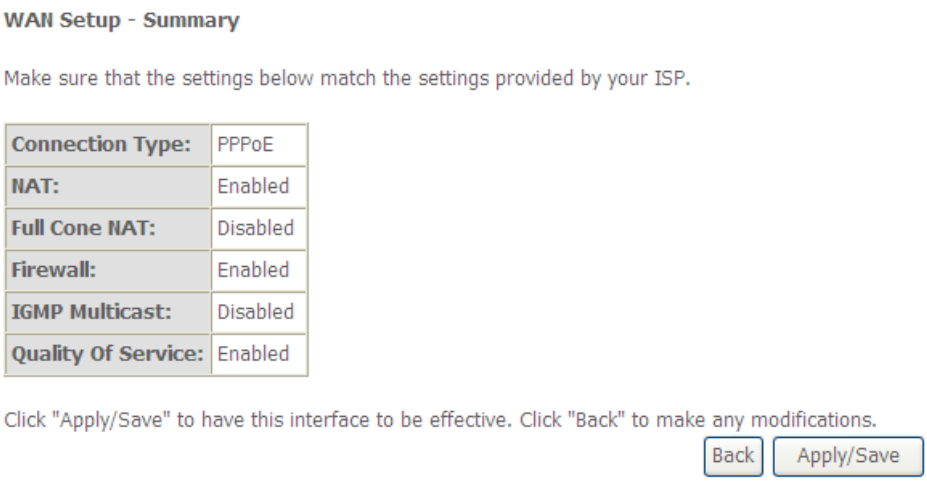


Table 5-28 describes the fields of the WAN Setup – Summary window.

Table 5-28 Field descriptions

Field	Description
Port/VPI/VCI (read-only)	Lists the port number, VPI value, and VCI value.
Connection Type (read-only)	The WAN connection type.
Service Name (read-only)	The name of the WAN service.
Service Category (read-only)	The selected service category of the WAN service.
IP Address (read-only)	The IP address of the WAN service.
Service State (read-only)	The current states of the WAN service.
NAT (read-only)	Indicates if NAT is enabled or disabled.
Full Cone NAT (read-only)	Indicates if Full Cone NAT is enabled or disabled.
Firewall (read-only)	Indicates if the firewall is enabled or disabled.
IGMP Multicast (read-only)	Indicates if IGMP multicast is enabled or

Field	Description
	disabled.
Quality of Service (read-only)	Indicates if QoS rules are enabled or disabled.
Back	Click to return to previous window to verify or modify the WAN setup.
Apply/Save	Click to save changes.

LAN

The LAN Setup window enables you to configure the settings for the LAN interface. As a network device, the ADSL Modem has its own IP address and MAC address. The default IP address is 192.168.0.254 and the subnet mask is 255.255.255.0. The user can configure these addresses through the LAN Setup window.

Select **LAN** from the **Advanced Setup** menu to open the LAN Setup window; see Figure 5-29.

Figure 5-29 LAN Setup window

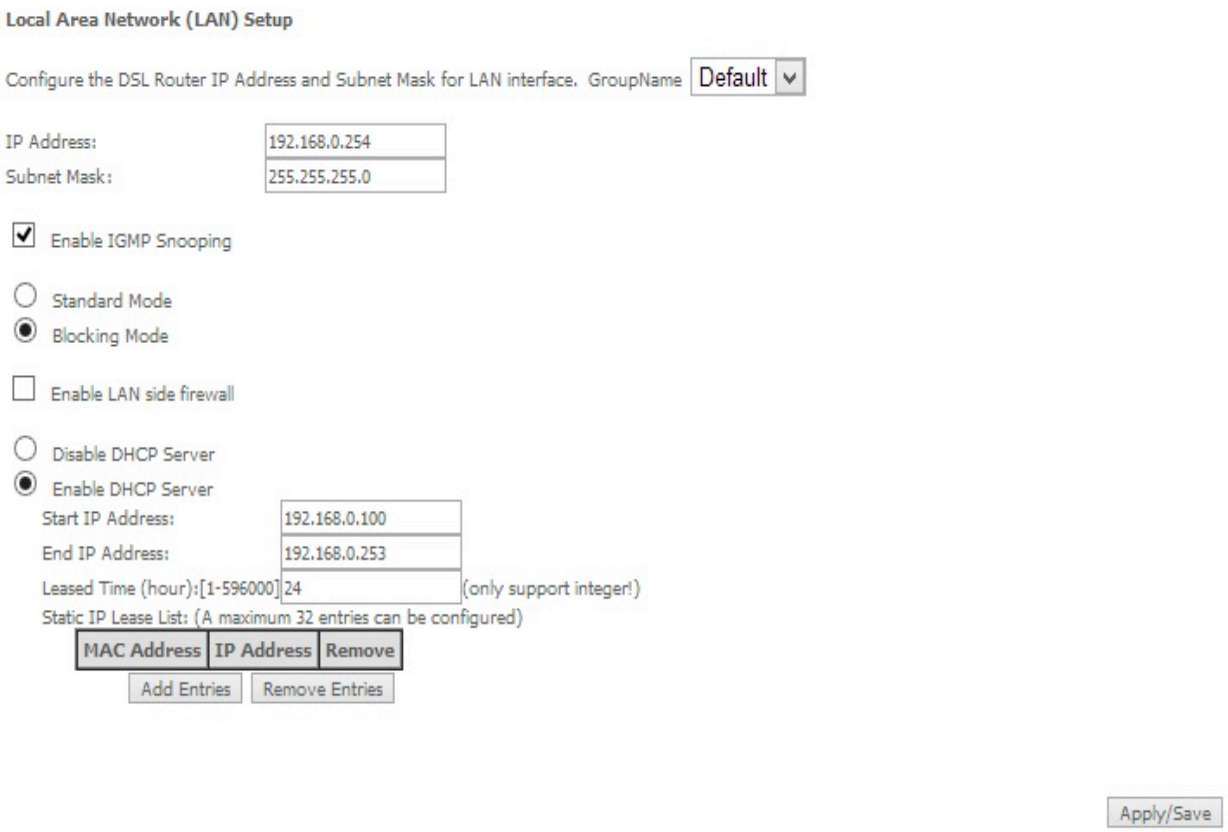


Table 5-30 describes the fields of the LAN Setup window.

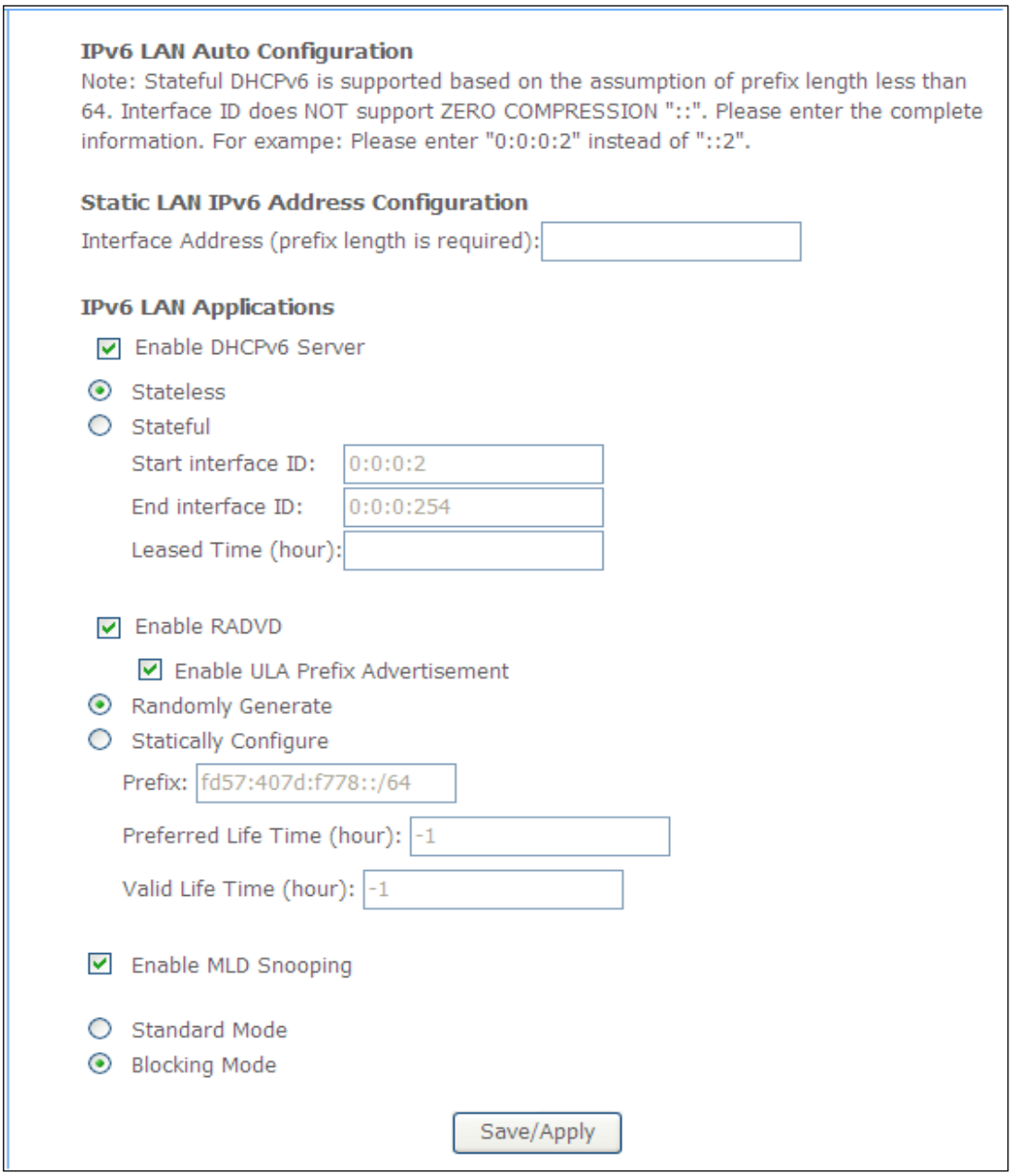
Table 5-30 Field descriptions

Field	Description
Group Name	Select a group name.
IP Address	Enter the LAN IP address. **Note:** If you change the default IP address, the new address will take effect after the modem is rebooted.
Subnet Mask	Enter the LAN subnet mask.
Enable IGMP Snooping	Enable to apply IGMP snooping and select one of the following: • **Standard Mode**

Field	Description
	• **Blocking Mode**
Enable LAN side firewall	Enable to apply a firewall to the LAN.
Disable DHCP Server	Select to disable DHCP server to use a static IP address.
Enable DHCP Server	Select to enable DHCP server and use a dynamic IP address range.
Start IP Address	If you have enabled DHCP server, enter a start IP address.
End IP Address	If you have enabled DHCP server, enter an end IP address.
Leased Time (hour)	Enter a time in hours for the DHCP lease time. If you enter **0**, the DHCP lease will not expire.
Static IP Lease List (read-only)	If you are using static IP, the static IP lease list shows the MAC address and static IP address. Enable a **Remove** check box for the corresponding MAC and IP address to remove.
Add Entries	Click to add a static IP entry. The DHCP Static IP Lease window opens. Enter the **MAC Address** and **IP Address** in the fields and click **Apply/Save**.
Remove Entries	If you have enabled one or more entries to remove, click to remove the selected static IP entries.
Configure the second IP Address and Subnet Mask for LAN interface	Enable to configure a secondary IP address and subnet mask for the LAN interface. Enter the second **IP Address** and **Subnet Mask** of the LAN interface in the fields.
Apply/Save	Click to save changes.

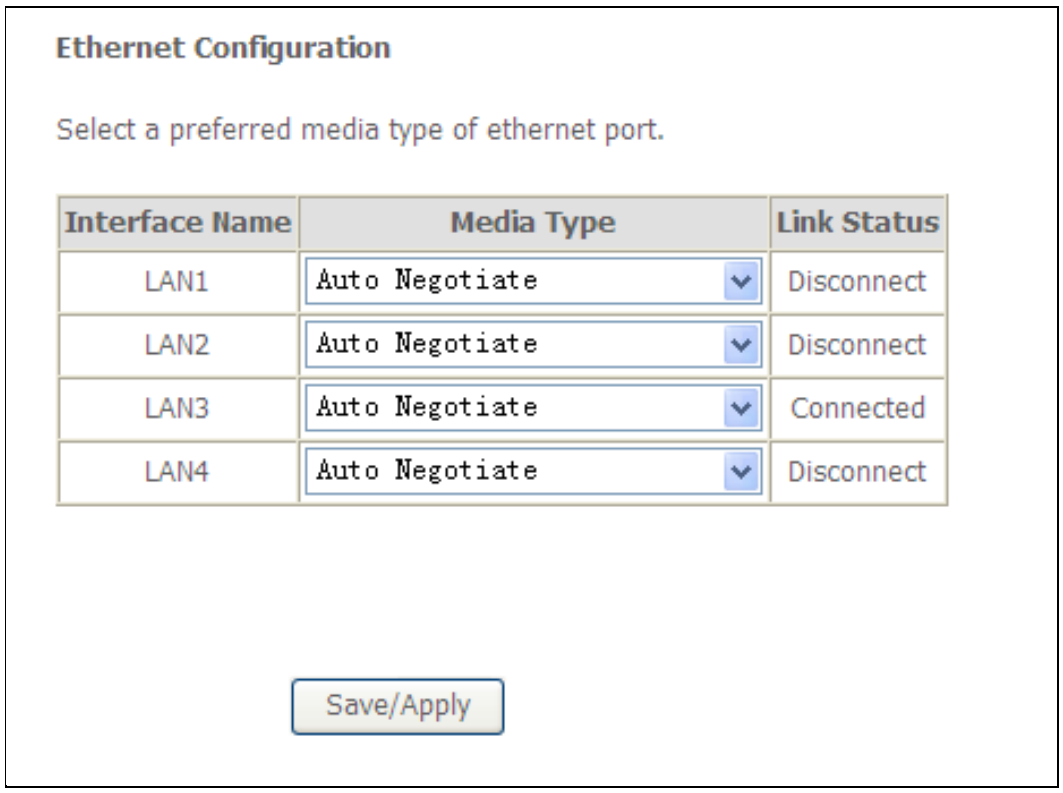
IPv6 Autoconfig

The IPv6 Autoconfig window enables you to configure the settings for the LAN interface with IPv6. Click IPv6 Autoconfig in the LAN submenu to open the IPv6 Autoconfig window; This window allows you to configure IPv6. When you are finished, click the **Apply / Save** button.



Ethernet Port

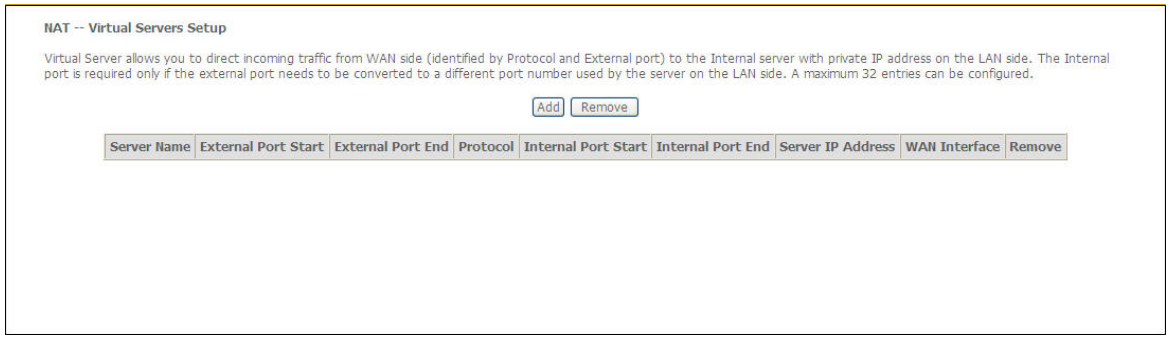
To access the **Ethernet Port** window, click the **Ethernet Port** button in the **Advanced Setup** submenu. You can configure the Media Type of Ethernet port in the new page and it will show you the Link Status of each Ethernet port. When you are finished, click the **Save/Apply** button



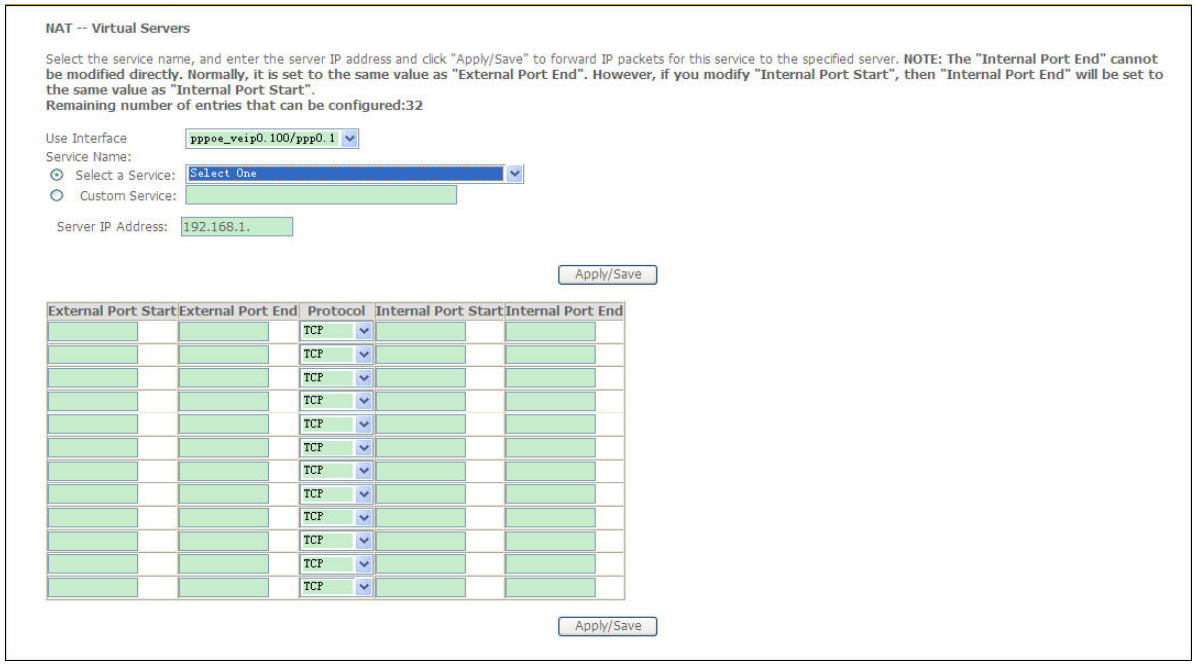
NAT

Virtual Servers

Select **Virtual Servers** from the **Advanced Setup** menu to open the NAT submenu.

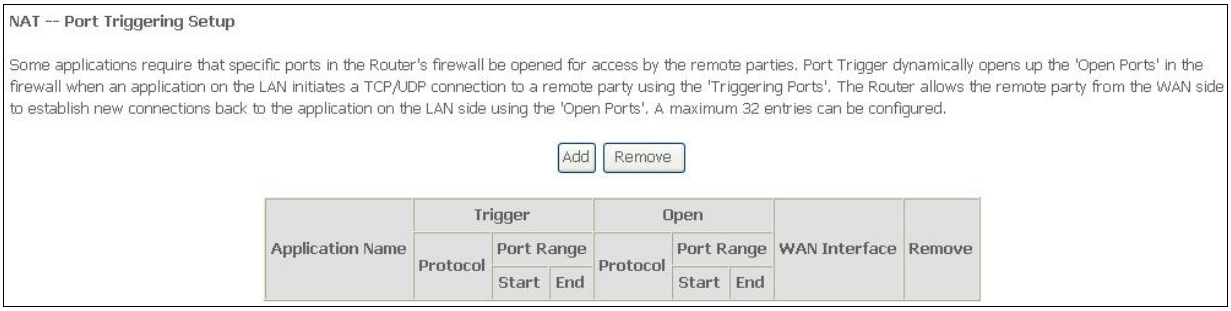


If you have selected to **Add** a virtual server, the Add NAT – Virtual Servers window opens

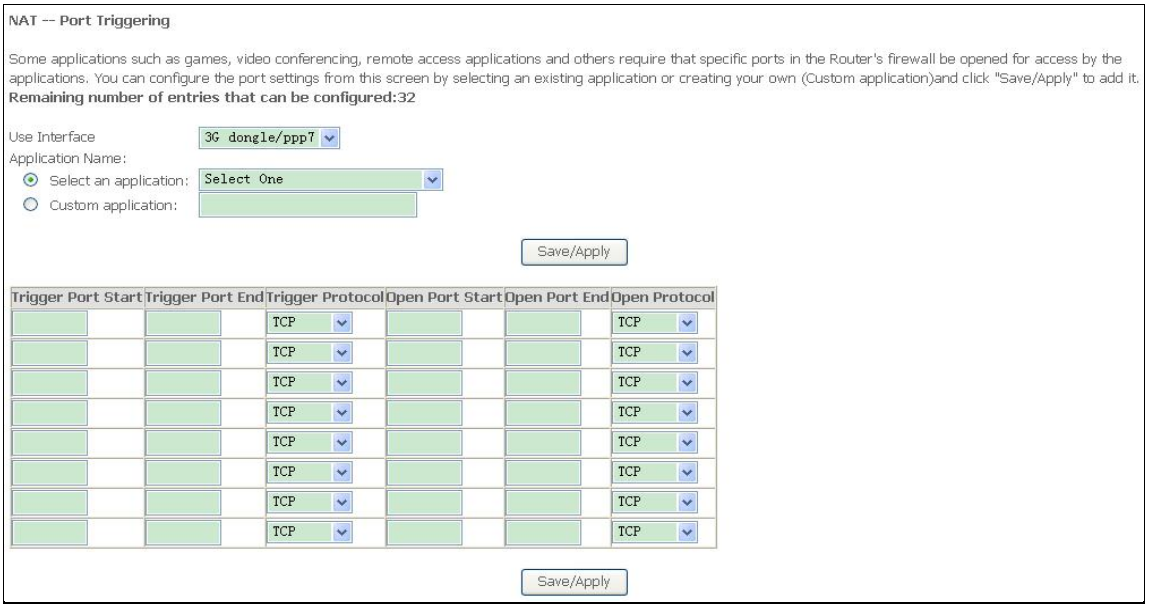


Port Triggering

Some applications such as games, video conferencing, remote access applications and others require that specific ports in the Router's firewall be opened for access by the applications. You can configure the port settings from this screen by selecting an existing application or creating your own (Custom application).
Click the **Add** button to configure port triggering.

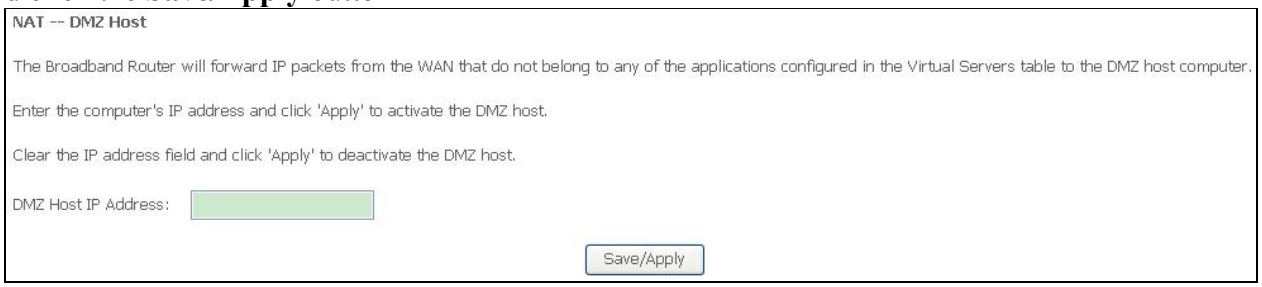


You can configure the port settings on this window by clicking the **Select an application** radio button and then using the drop-down list to choose an existing application, or by clicking the **Custom application** radio button and entering your own Application Rule in the field provided.
Click **Save/Apply** when you are finished with the port setting configuration. The new Application Rule will appear in the Port Triggering table.



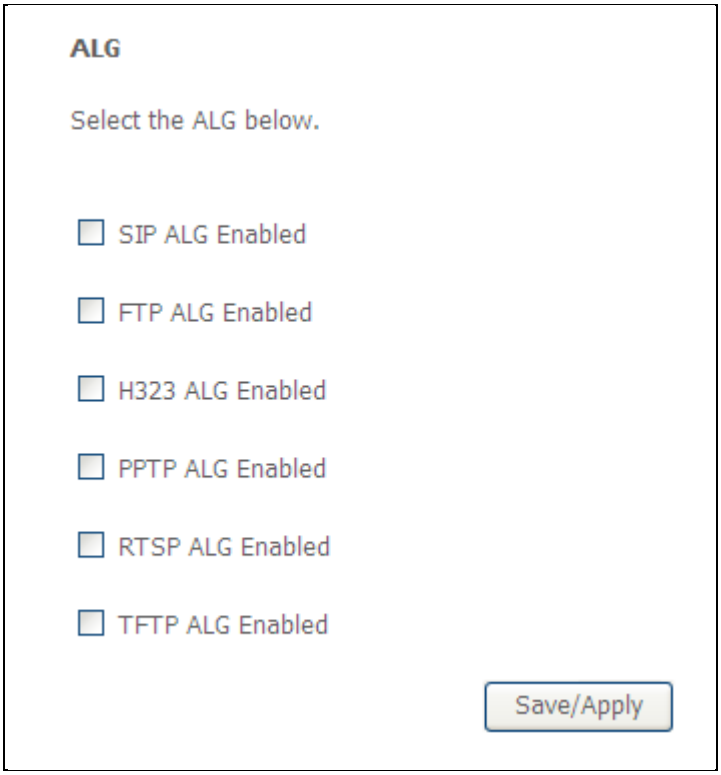
DMZ Host

Since some applications are not compatible with NAT, the Router supports use of a DMZ IP address for a single host on the LAN. This IP address is not protected by NAT and will therefore be visible to agents on the Internet with the right type of software. Keep in mind that any client PC in the DMZ will be exposed to various types of security risks. If you use the DMZ, take measures (such as client-based virus protection) to protect the remaining client PCs on your LAN from possible contamination through the DMZ.
To designate a DMZ IP address, type in the IP Address of the server or device on your LAN, and click the **Save/Apply** button



ALG

To access the **ALG** window, click the **ALG** button in the **NAT** submenu. You can enable and disable the **ALG** functions in the new page. When you are finished, click the **Save/Apply** button.



Security

The Security window enables you to configure the IP filtering and MAC filtering.

Select **Security** from the **Advanced Setup** menu to open the Security submenu.

IP Filtering

IP filtering allows you to configure the outgoing and incoming IP filter settings.

Select **IP Filtering** from the **Security** menu to open the **IP Filtering** submenu.

Outgoing

Select **Outgoing** from the **IP Filtering** submenu to open the Outgoing IP Filtering Setup window; see Figure 5-31.

Figure 5-31 Outgoing IP Filtering Setup window

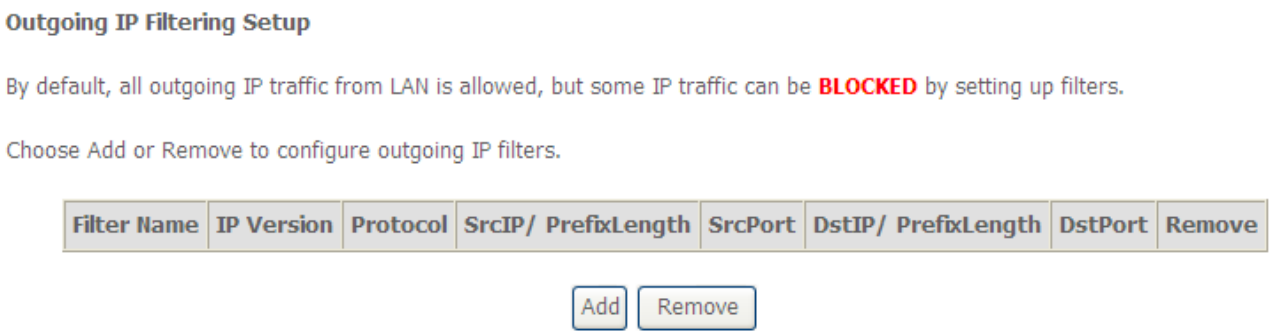


Table 5-32 describes the fields of the Outgoing IP Filtering Setup window.

Table 5-32 Field descriptions

Field	Description
Filter Name (read-only)	The name of the outgoing IP traffic filter.
Protocol (read-only)	The protocol of the filter.
Source Address/Mask (read-only)	The source address and subnet mask of the filter.
Source Port (read-only)	The source port number of the filter.
Dest. Address/Mask (read-only)	The destination address and subnet mask.
Dest. Port (read-only)	The destination port number.
Remove	Enable the check-box to select the outgoing IP

Field	Description
	filter to be removed from the list.
Add	Click to add an outgoing IP filter; the Add IP Filter -- Outgoing window opens.
Remove	Click to remove selected outgoing IP filter.

If you have selected to **Add** an outgoing IP filter, the Add IP Filter -- Outgoing window opens; see Figure 5-33.

Figure 5-33 Add IP Filter -- Outgoing window

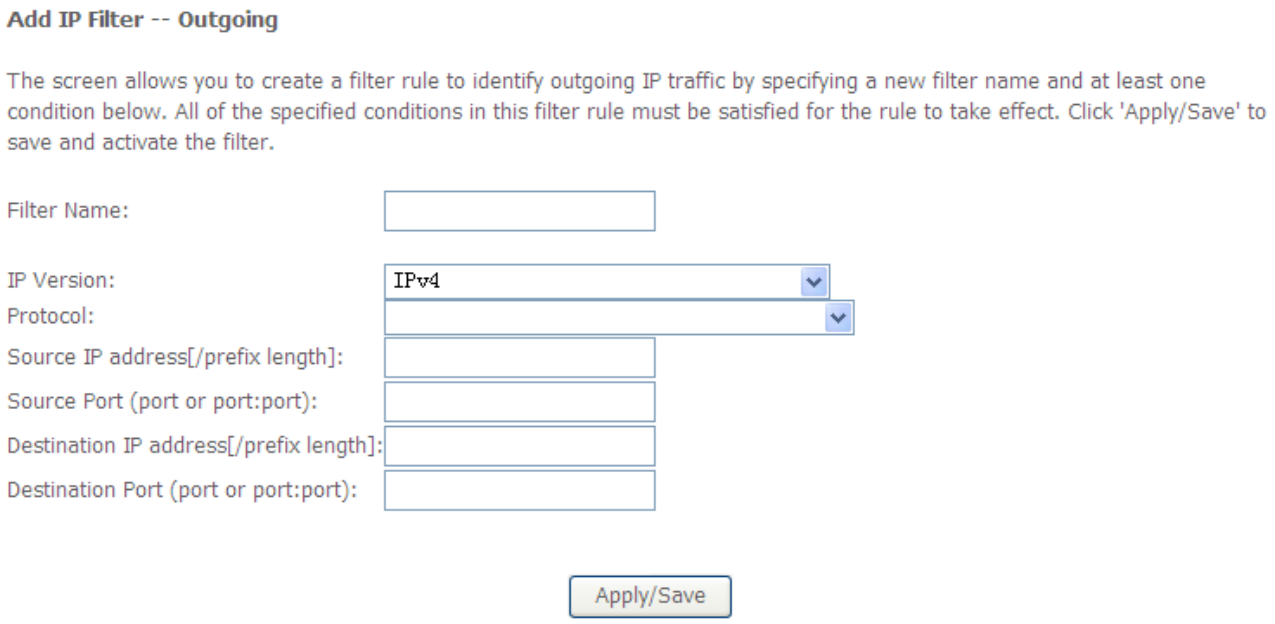


Figure 5-34 describes the fields of the Add IP Filter -- Outgoing window.

Table 5-34 Field descriptions

Field	Description
Filter Name	Enter the name of the outgoing IP filter.
Protocol	Select the protocol of the filter: • **TCP/UDP** • **TCP** • **UDP** • **TCMP**
Source IP Address	Enter the source IP address.

Field	Description
Source Subnet Mask	Enter the source subnet mask.
Source Port	Enter the source port number.
Destination IP Address	Enter the destination IP address.
Destination Subnet Mask	Enter the destination subnet mask.
Destination Port	Enter the destination port number.
Apply/Save	Click to save changes.

Incoming

Select **Incoming** from the **IP Filtering** submenu to open the Incoming IP Filtering Setup window; see Figure 5-35.

Figure 5-35 Incoming IP Filtering Setup window

Table 5-36 describes the fields of the Incoming IP Filtering Setup window.

Table 5-36 Field descriptions

Field	Description
Filter Name (read-only)	The name of the incoming IP traffic filter.
Interfaces (read-only)	The interface of the incoming IP filter.
Protocol (read-only)	The protocol of the filter.
Source Address/Mask (read-only)	The source address and subnet mask of the

	filter.
Source Port (read-only)	The source port number of the filter.
Dest. Address/Mask (read-only)	The destination address and subnet mask.
Dest. Port (read-only)	The destination port number.
Remove	Enable the check-box to select the incoming IP filter to be removed from the list.
Add	Click to add an incoming IP filter; the Add IP Filter -- Incoming window opens.
Remove	Click to remove selected incoming IP filter.

If you have selected to **Add** an incoming IP filter, the Add IP Filter -- Incoming window opens; see Figure 5-37.

Figure 5-37 Add IP Filter -- Incoming window

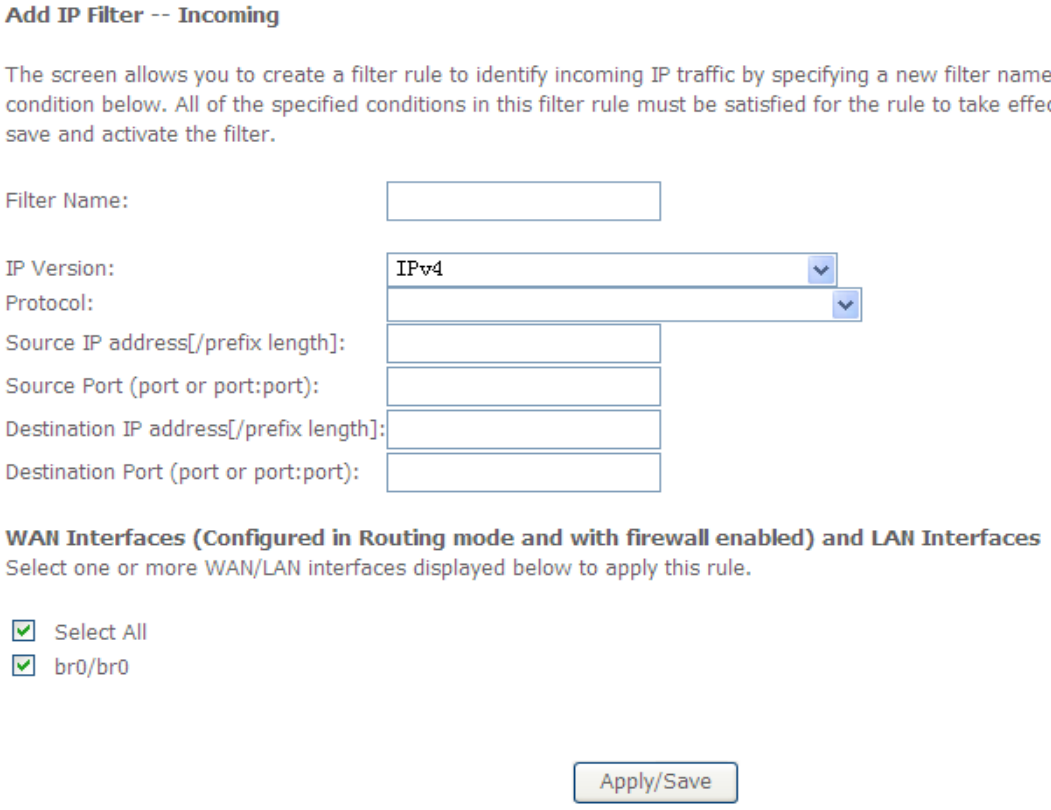


Table 5-38 describes the fields of the Add IP Filter -- Incoming window.

Table 5-38 Field descriptions

Field	Description
Filter Name	Enter the name of the incoming IP filter.
Protocol	Select the protocol of the filter: • **TCP/UDP** • **TCP** • **UDP** • **TCMP**
Source IP Address	Enter the source IP address.
Source Subnet Mask	Enter the source subnet mask.
Source Port	Enter the source port number.
Destination IP Address	Enter the destination IP address.
Destination Subnet Mask	Enter the destination subnet mask.
Destination Port	Enter the destination port number.
WAN Interfaces (Configured in Routing mode and with firewall enabled) and LAN Interfaces	Enable **Select All** or enable individual WAN/LAN interfaces to apply this rule.
Apply/Save	Click to save changes.

MAC Filtering

The MAC Filtering window enables you to control access to and from specific MAC addresses.

Select **MAC Filtering** from the **Security** submenu to open the MAC Filtering Setup window; see Figure 5-39.

Figure 5-39 MAC Filtering Setup window

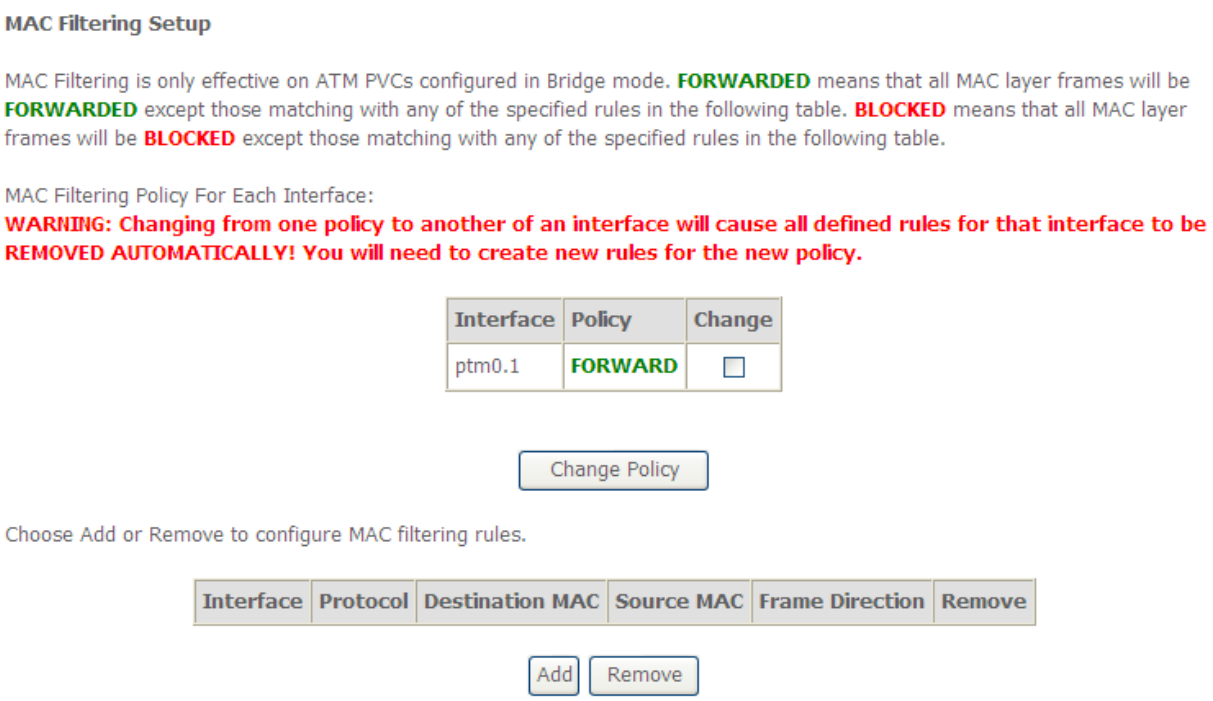


Table 5-40 describes the fields of the MAC Filtering Setup window.

Table 5-40 Field descriptions

Field	Description
Interface (read-only)	The interface of the MAC filter rule.
Policy (read-only)	The MAC filter policy applied to the interface.
Change	Enable the check-box to select the policy to be changed.
Change Policy	Click to change the selected policy.
Interface (read-only)	The interface of the MAC filter rule.
Protocol (read-only)	The protocol of the MAC filter rule.
Destination MAC (read-only)	The destination MAC address.
Source MAC (read-only)	The source MAC address.
Frame Direction (read-only)	The frame direction of the MAC filter rule.
Remove	Enable the check-box to select the MAC filter rule to be removed from the list.
Add	Click to add a MAC filter rule. The Add Mac

Field	Description
	Filter window opens.
Remove	Click to remove selected MAC filter rule.

If you have selected to **Add** a MAC filter, the Add MAC Filter window opens; see Figure 5-.

Figure 5-41 Add MAC Filter window

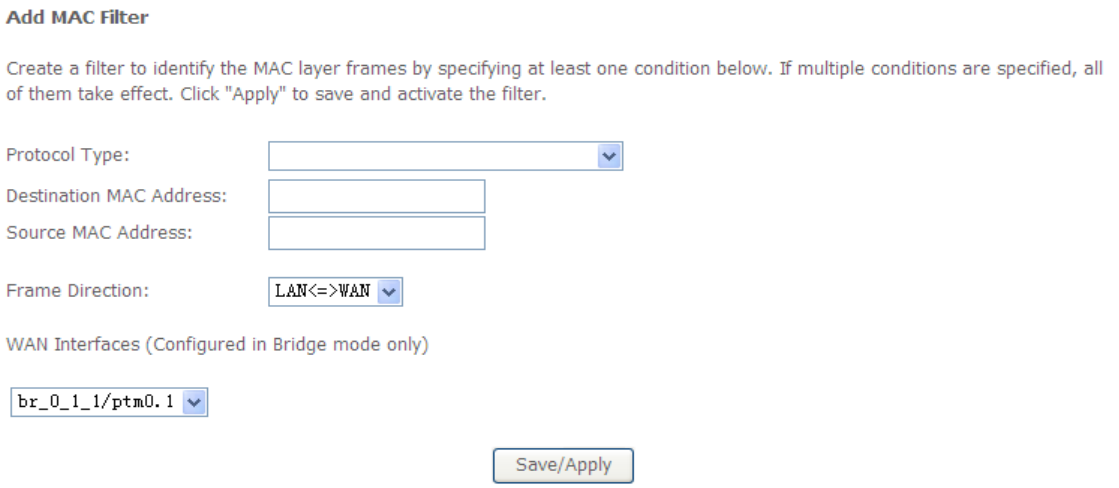


Table 5-42 describes the fields of the Add MAC Filter window.

Table 5-42 Field descriptions

Field	Description
Protocol Type	Select the protocol type: • **PPPoE** • **IPv4** • **IPv6** • **AppleTalk** • **IPX** • **NetBEUI** • **IGMP**
Destination MAC Address	Enter the destination MAC address.
Source MAC Address	Enter the source MAC address.
Frame Direction	Select the frame direction:

Field	Description
	• **LAN<=>WAN** • **WAN=>LAN** • **LAN=>WAN**
WAN Interfaces (Configured in Bridge mode only)	Select the WAN interface.
Save/Apply	Click to save changes.

Parental Control

The Parental Control menu enables you to configure time restrictions and setup URL filters.

Select **Parental Control** from the **Advanced Setup** menu to open the Parental Control menu.

Time Restriction

Time Restriction enables you to set limits and restrictions for online use.

Select **Time Restriction** from the **Parental Control** menu to open the Access Time Restriction window; see Figure 5-43.

Figure 5-43 Access Time Restriction window

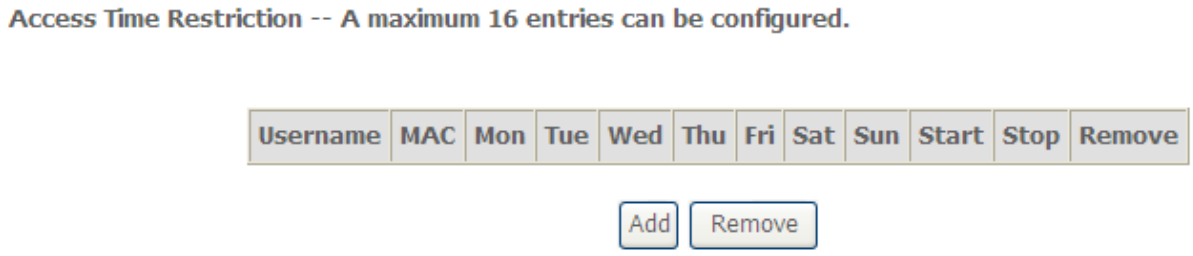


Table 5-44 describes the fields of the Access Time Restriction window.

Table 5-44 Field descriptions

Field	Description
Username (read-only)	The user whom the time restriction is applied.

Field	Description
MAC (read-only)	The MAC address.
Mon to Sun (read-only)	Indicates the day(s) of the week that the time restriction is applied.
Start (read-only)	The start time of the time restriction.
Stop (read-only)	The end time of the time restriction.
Remove	Enable the check-box to select the time restriction to be removed from the list.
Add	Click to add a time restriction rule; the Access Time Restriction window opens.
Remove	Click to remove selected time restriction.

If you have selected to **Add** an access time restriction, the Access Time Restriction configuration window opens; see Figure 5-45.

Figure 5-45 Access Time Restriction configuration window

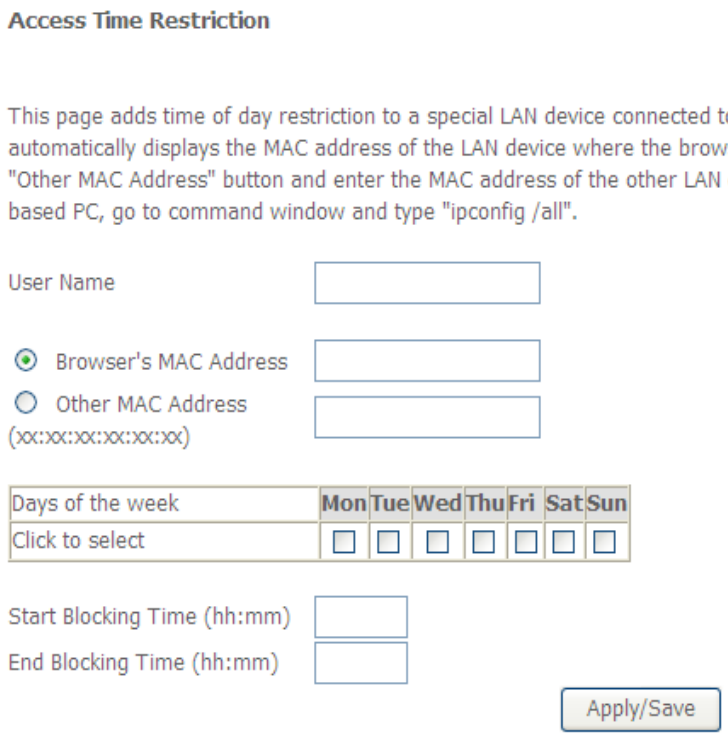


Table 5-46 describes the fields of the Access Time Restriction configuration window.

Table 5-46 Field descriptions

Field	Description
User Name	Enter the username of the user whom the time restriction is applied.
Browser's MAC Address	Select **Browser's MAC Address** and enter the MAC address of the browser.
Other MAC Address	Select **Other MAC Address** and enter another MAC address.
Days of the week	Enable the check-box of the day or days of the week that the time restriction is applied.
Start Blocking Time (hh:mm)	Enter the start blocking time.
End Blocking Time (hh:mm)	Enter the end blocking time.
Apply/Save	Click to save changes.

URL Filter

The URL Filter window enables you to restrict certain websites by filtering URLs.

Select **URL Filter** from the **Parental Control** menu to open the URL Filter window; see Figure 5-47.

Figure 5-47 URL Filter window

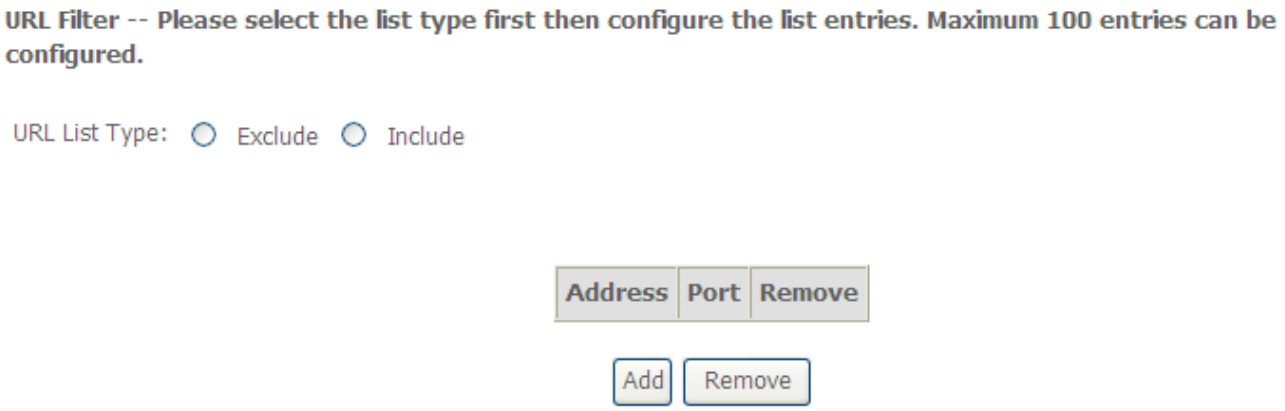


Table 5-48 describes the fields of the URL Filter window.

Table 5-48 Field descriptions

Field	Description
URL List Type	Select **Exclude** to add a URL to the filter list of

Field	Description
	URLs that are excluded from filtering. Select **Include** to add a URL to the filter list of filtered URLs.
Address (read-only)	The address of the URL.
Port (read-only)	The port by which the URL is accessed.
Remove	Enable the check-box to select the URL from the filter list to be removed.
Add	Click to add a URL to the filter list. The URL Filter Add window opens.
Remove	Click to remove the selected URL(s) from the filter list.

Figure 5-49 URL Filter Add window

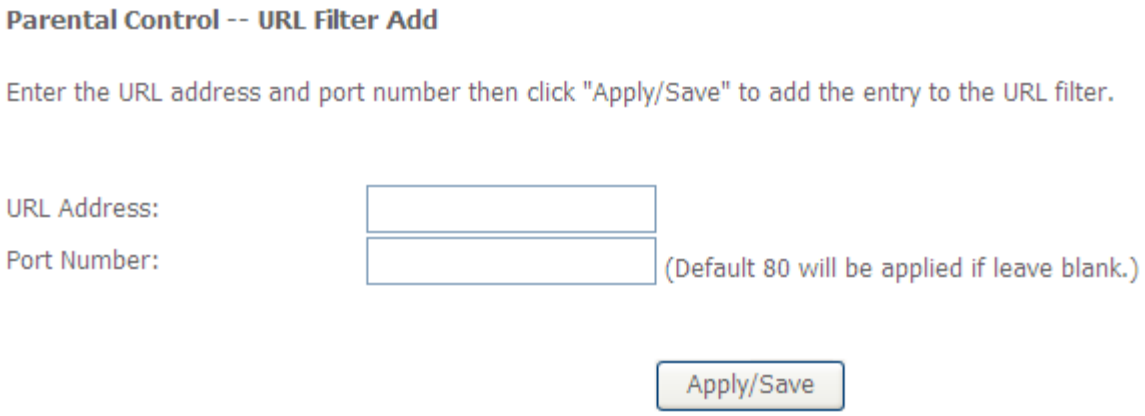


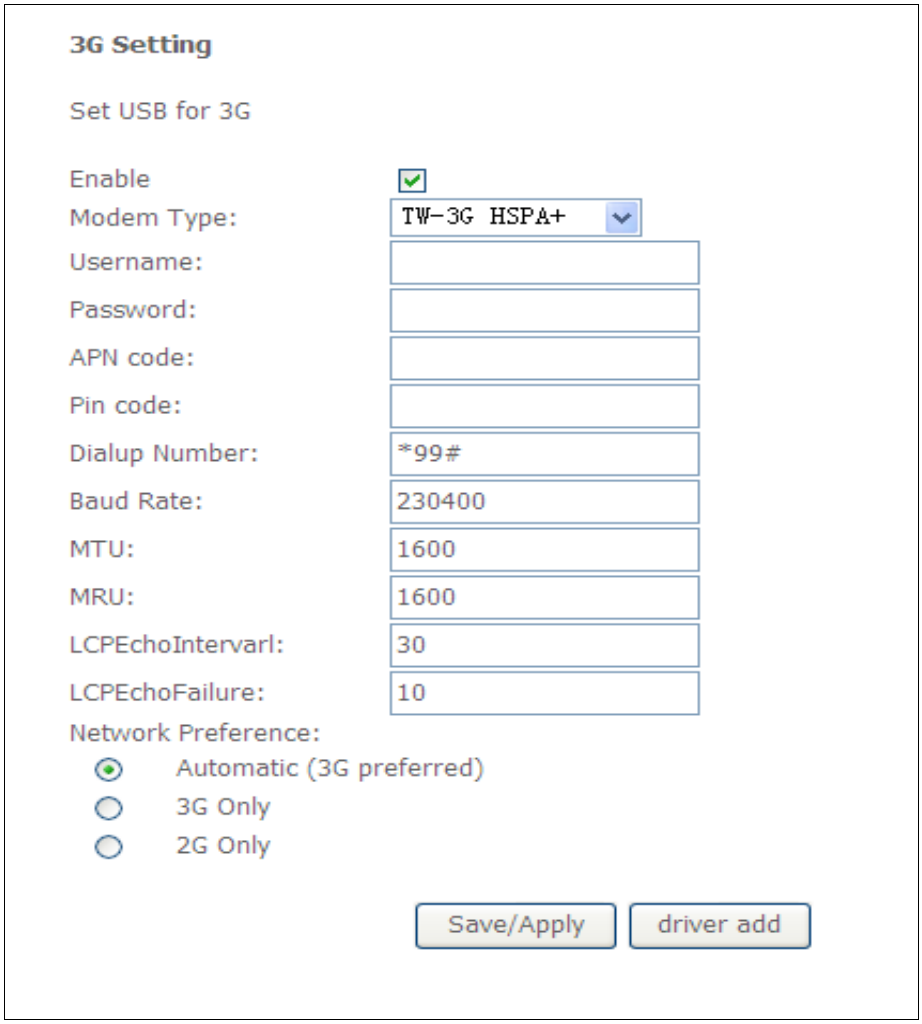
Table 5-50 describes the fields of the URL Filter Add window.

Table 5-50 Field descriptions

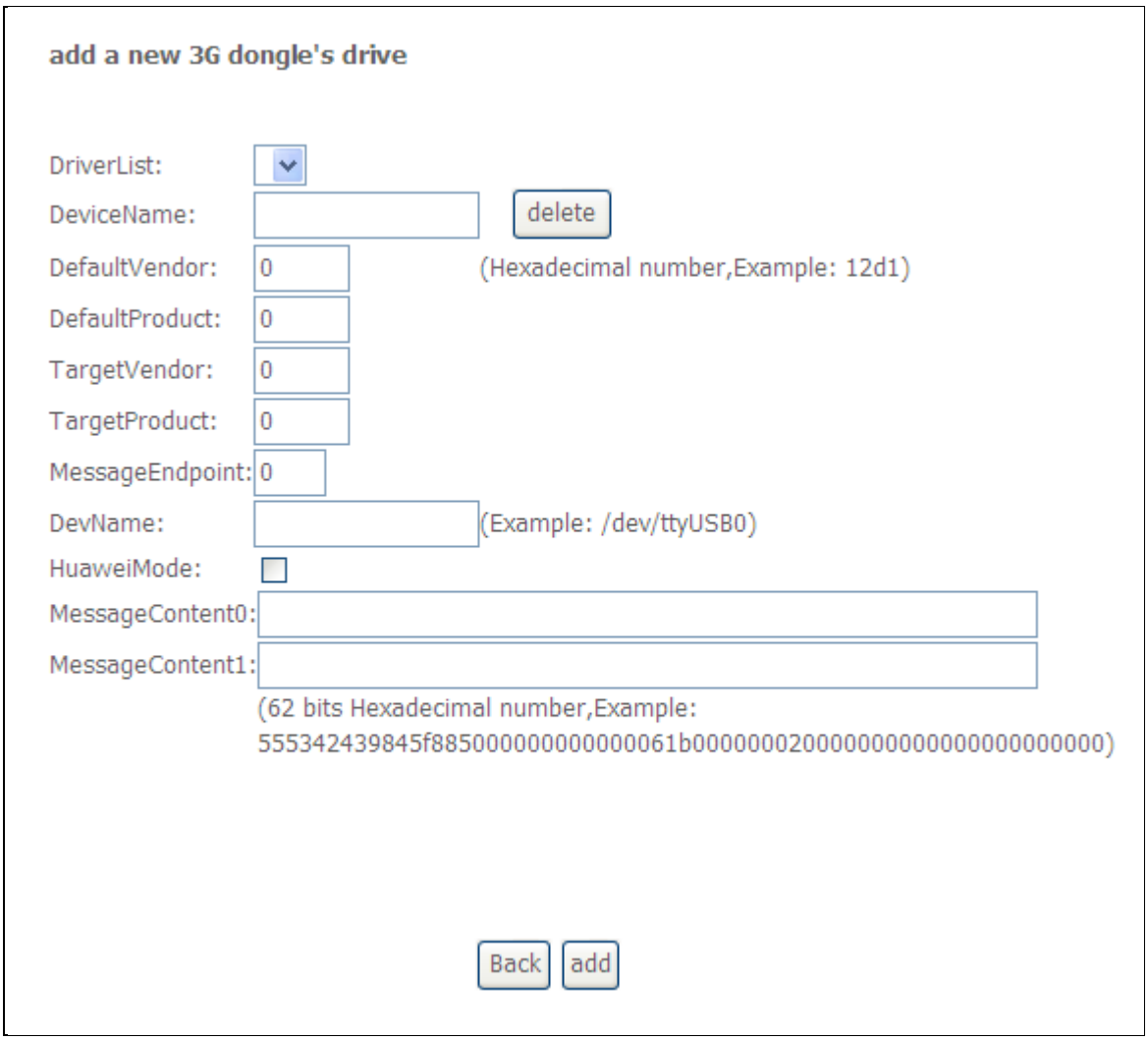
Field	Description
URL Address	Enter the URL address.
Port Number	Enter the port number.
Apply/Save	Click to apply and save the URL to the filter list.

3G/4G/LTE

To access the **3G** window, click the **3G** button in the **Advanced Setup** directory. This window allows you to set up 3G on the Router. When you are finished, click on the **Save/Apply** button.



If you want to add new 3G dongle, click **driver add** button, and the new page will show you how to configure a new 3G dongle. After you are finished, click on the **add** button.


add a new 3G dongle's drive
DriverList:
DeviceName:
delete
DefaultVendor:
0
(Hexadecimal number,Example: 12d1)
DefaultProduct:
0
TargetVendor:
0
TargetProduct:
0
MessageEndpoint:
0
DevName:
(Example: /dev/ttyUSB0)
HuaweiMode:
MessageContent0:
MessageContent1:
(62 bits Hexadecimal number,Example:
555342439845f8850000000000000061b000000020000000000000000000000)
Back
add

Quality of Service

Quality of Service enables you to configure the QoS settings for the WAN interface.

Select **Quality of Service** from the **Advanced Setup** menu to open the Quality of Service menu and the QoS -- Queue Management Configuration window; see Figure 5-51.

Figure 5-51 QoS – Queue Management Configuration window

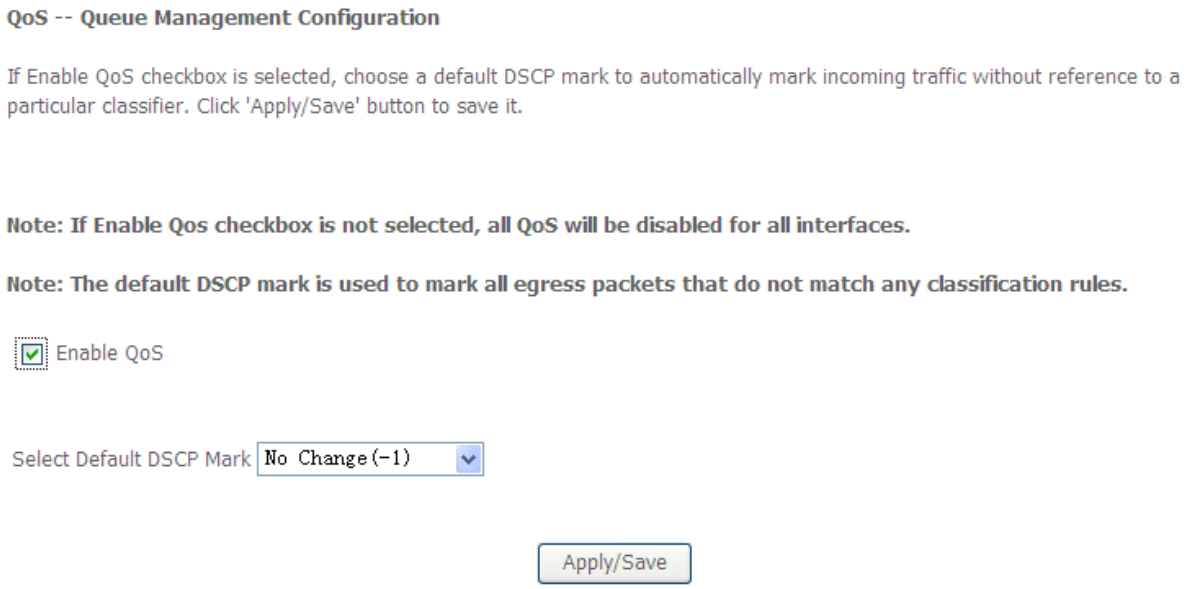


Table 5-52 describes the fields of the QoS -- Queue Management Configuration window.

Table 5-52 Field descriptions

Field	Description
Enable QoS	Enable to apply QoS.
Select Default DSCP Mark	Select the default DSCP mark:

Field	Description
	No Change(-1) Auto Marking(-2) default(000000) AF13(001110) AF12(001100) AF11(001010) CS1(001000) AF23(010110) AF22(010100) AF21(010010) CS2(010000) AF33(011110) AF32(011100) AF31(011010) CS3(011000) AF43(100110) AF42(100100) AF41(100010) CS4(100000) EF(101110) CS5(101000) CS6(110000) CS7(111000)
Apply/Save	Click to save changes.

Queue Config

Select **Queue Config** from the **Quality of Service** menu to open the QoS Queue Configuration window; see Figure 5-53.

Figure 5-53 QoS Queue Configuration window

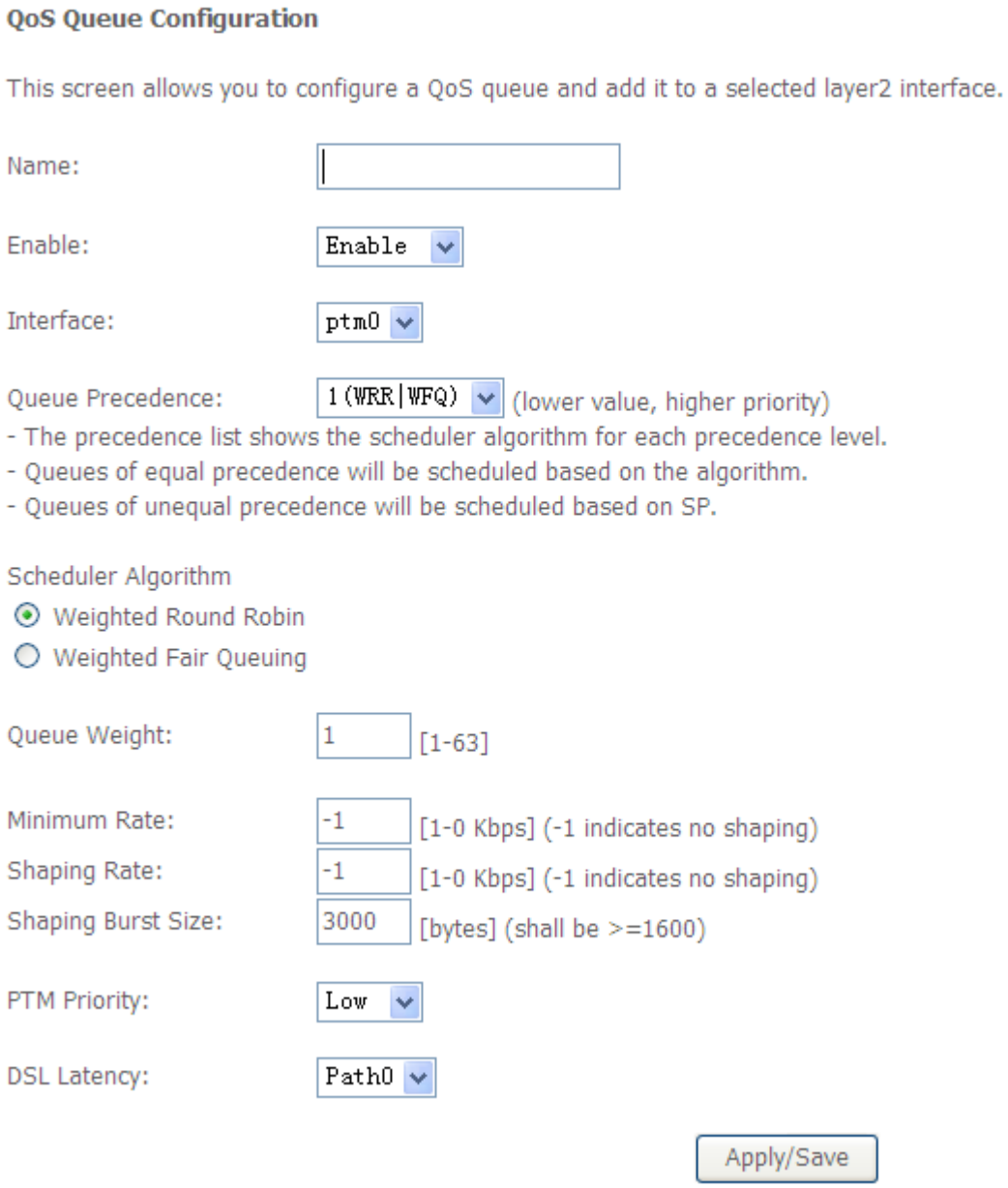


Table 5-54 describes the fields of the QoS Queue Configuration window.

Table 5-54 Field description

Field	Description
Name	Enter the name of the QoS queue.
Enable	Select **Enable** to use the QoS queue entry. Select **Disable** to stop using the QoS queue entry.
Interface	Select the interface for the QoS queue entry.
Precedence	Select the priority level of the QoS queue entry.
DSL Latency	Select the DSL latency. **Note:** The only available option is **Path0**
PTM (VDSL2) Priority	Select the PTM (VDSL2) priority of the QoS queue: **Note:** The only available option is **Low**.
Apply/Save	Click to save changes.

QoS Classification

Select **QoS Classification** from the **Quality of Service** menu to open the QoS Classification window; see Figure 5-55.

Figure 5-55 QoS Classification window

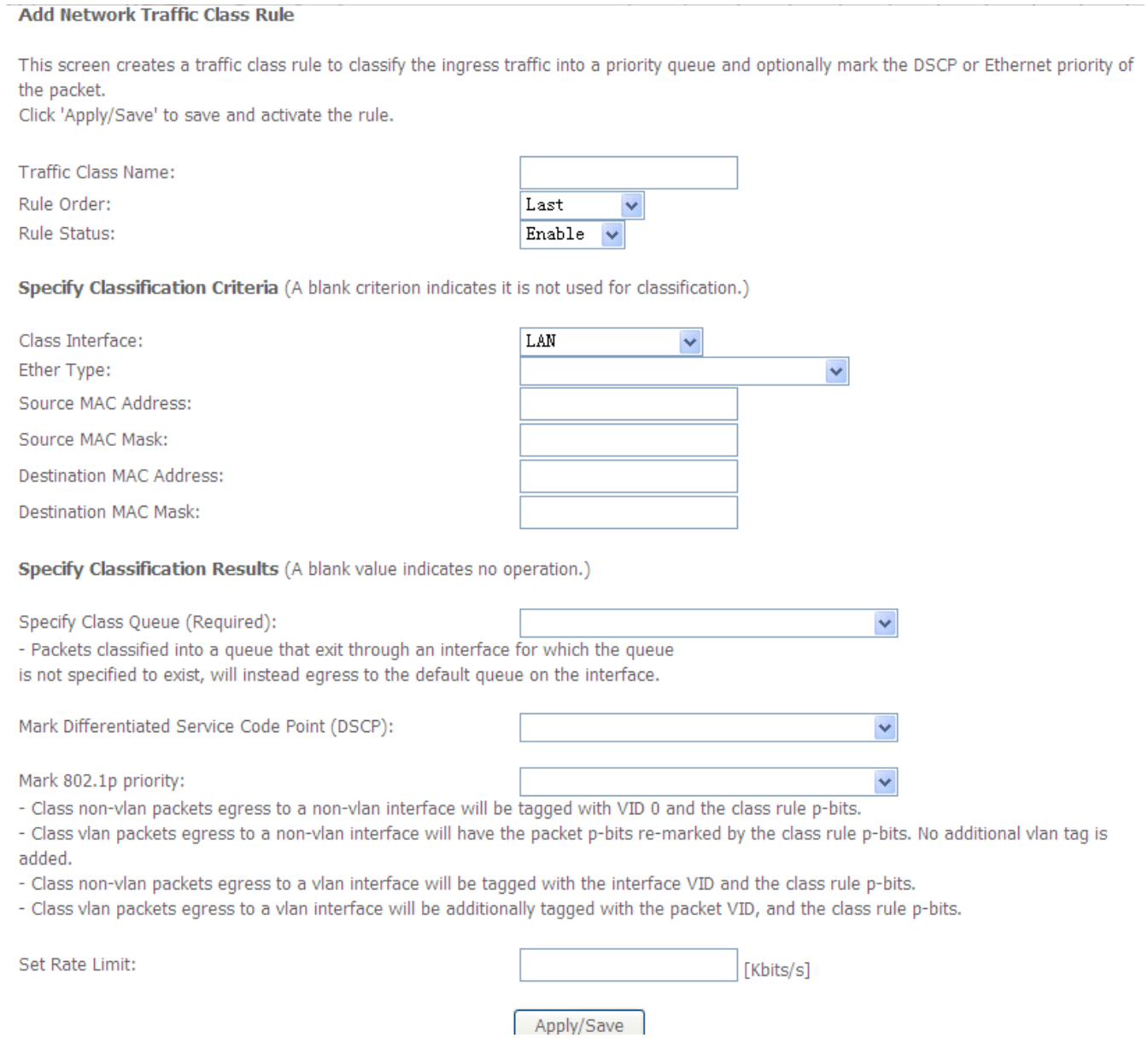


Table 5-56 describes the fields of the QoS Classification window.

Table 5-56 Field descriptions

Field	Description
Add Network Traffic Class Rule	
Traffic Class Name	Enter the traffic class name.
Rule Order	Select the order of the rule: **Note:** The only available option is **Last**.
Rule Status	Select **Enable** to apply the rule. Select **Disable** to turn off the rule.
Specify Classification Criteria	
Class Interface	Select the class interface: • **eth0** • **Local**
Ether Type	Select the Ethernet type: IP (0x800) ARP (0x806) IPv6 (0x86DD) PPPoE_DISC (0x8863) PPPoE_SES (0x8864) 8865 (0x8865) 8866 (0x8866) 8021Q (0x8100)
Source MAC Address	Enter the source MAC address for the QoS rule.
Source MAC Mask	Enter the source MAC mask for the QoS rule.
Destination MAC Address	Enter the destination MAC address for the QoS rule.
Destination MAC Mask	Enter the destination MAC mask for the QoS rule.
Specify Classification Results	
Assign Classification Queue	Select a classification queue.
Mark Differentiated Code Service Point	Select the DSCP:

Field	Description
(DSCP)	Auto Marking default AF13(001110) AF12(001100) AF11(001010) CS1(001000) AF23(010110) AF22(010100) AF21(010010) CS2(010000) AF33(011110) AF32(011100) AF31(011010) CS3(011000) AF43(100110) AF42(100100) AF41(100010) CS4(100000) EF(101110) CS5(101000) CS6(110000) CS7(111000)
Mark 802.1p Priority	Select an 802.1p priority level between **0** and **7**.
Tag VLAN ID (0-4094)	Assign a VLAN ID tag between 0 and 4094
Apply/Save	Click to save changes.

Routing

The Routing window enables you to configure the routing settings of the gateway.

Select **Routing** from the **Advanced Setup** menu to open the Routing menu.

Default Gateway

Select **Default Gateway** in the **Routing** menu to open the Default Gateway window; see Figure 5-57.

Figure 5-57 Default Gateway window

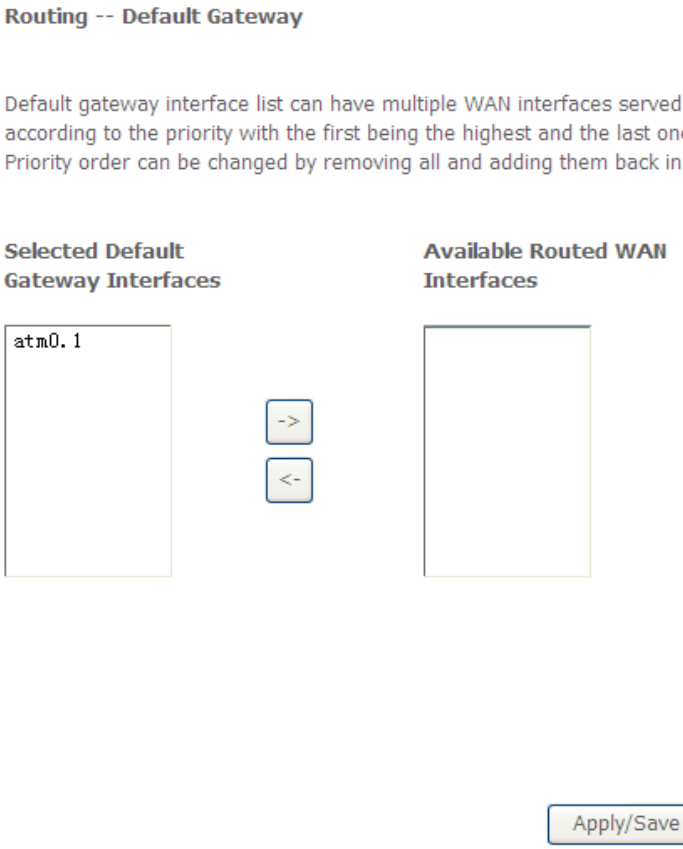


Table 5-58 describes the fields of the Default Gateway window.

Table 5-58 Field descriptions

Field	Description
Selected WAN Interface	Select the WAN interface to use as the default gateway.
Save/Apply	Click to save changes.

Static Route

Select **Static Route** in the **Routing** menu to open the Static Route window; see Figure 5-59.

Figure 5-59 Static Route window

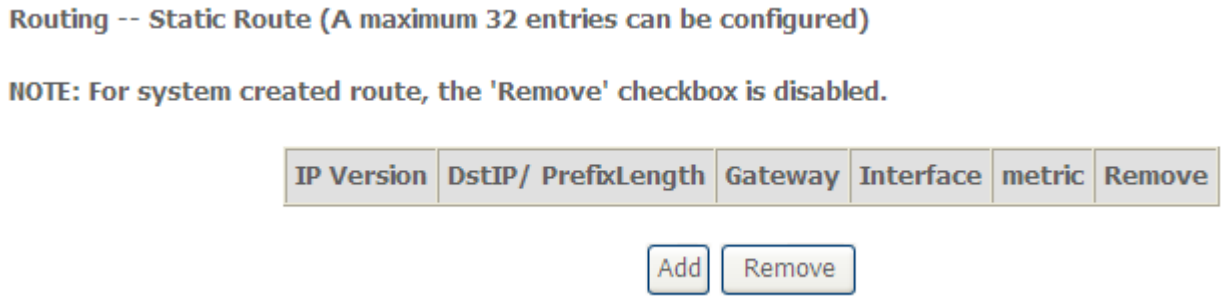


Table 5- describes the fields of the Static Route window.

Table 5-60 Field descriptions

Field	Description
Destination (read-only)	The destination network address.
Subnet Mask (read-only)	The destination subnet mask.
Gateway (read-only)	The selected gateway IP address.
Interface (read-only)	The selected interface.
Remove	Enable the check-box to select the static route from the list to be removed.
Add	Click to add a static route. The Static Route Add window opens.
Remove	Click to remove the selected static route(s) from the list.

If you have selected to **Add** a static route, the Static Route Add window opens; see Figure 5-3.

Figure 5-3 Static Route Add window

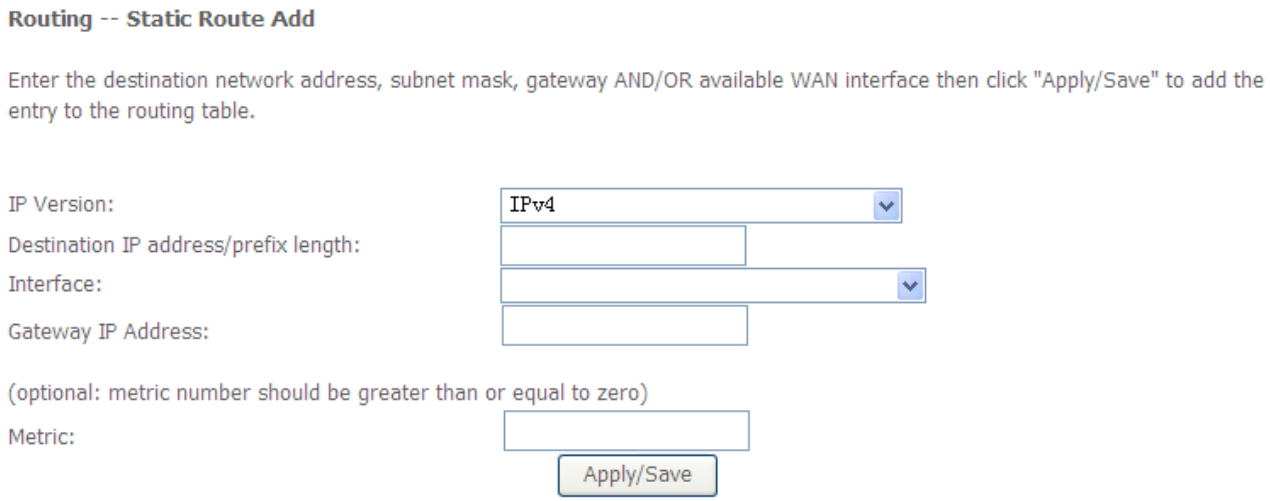


Table 5-62 describes the fields of the Static Route Add window.

Table 5-62 Field descriptions

Field	Description
Destination Network Address	Enter the destination network address.
Subnet Mask	Enter the destination subnet mask.
Use Interface	Select an interface.
Use Gateway IP Address	Enter a gateway IP address.
Apply/Save	Click to save changes.

Policy Routing

Select **Policy Routing** in the **Routing** menu to open the Policy Routing Setting window; see Figure 5-63.

Figure 5-63 Policy Routing Setting window

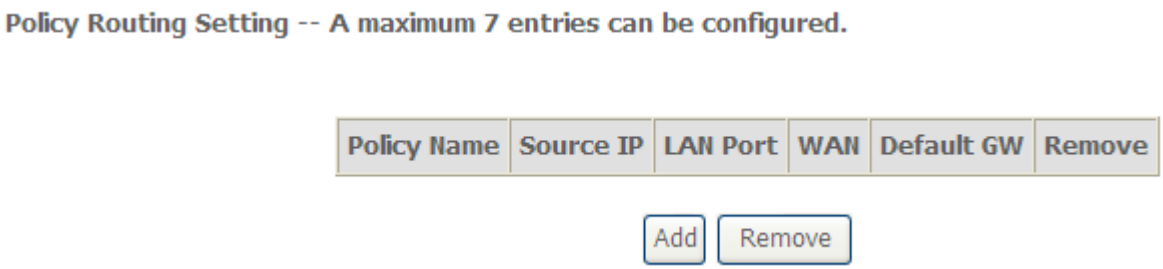


Table 5-64 describes the fields of the Policy Routing Setting window.

Table 5-64 Field descriptions

Field	Description
Policy Name (read-only)	The name of the policy route.
Source IP (read-only)	The source IP address of the packets.
LAN Port (read-only)	The LAN port in use.
WAN (read-only)	The selected routing WAN interface.
Default GW (read-only)	The selected default gateway.
Remove	Enable the check-box to select the policy route from the policy routing list to be removed.
Add	Click to add a policy route. The Policy Routing Setup window opens.
Remove	Click to remove the selected policy route(s) from the list.

If you have selected to **Add** a policy route, the Policy Routing Setup window opens; see Figure 5-65.

Figure 5-65 Policy Routing Setup window

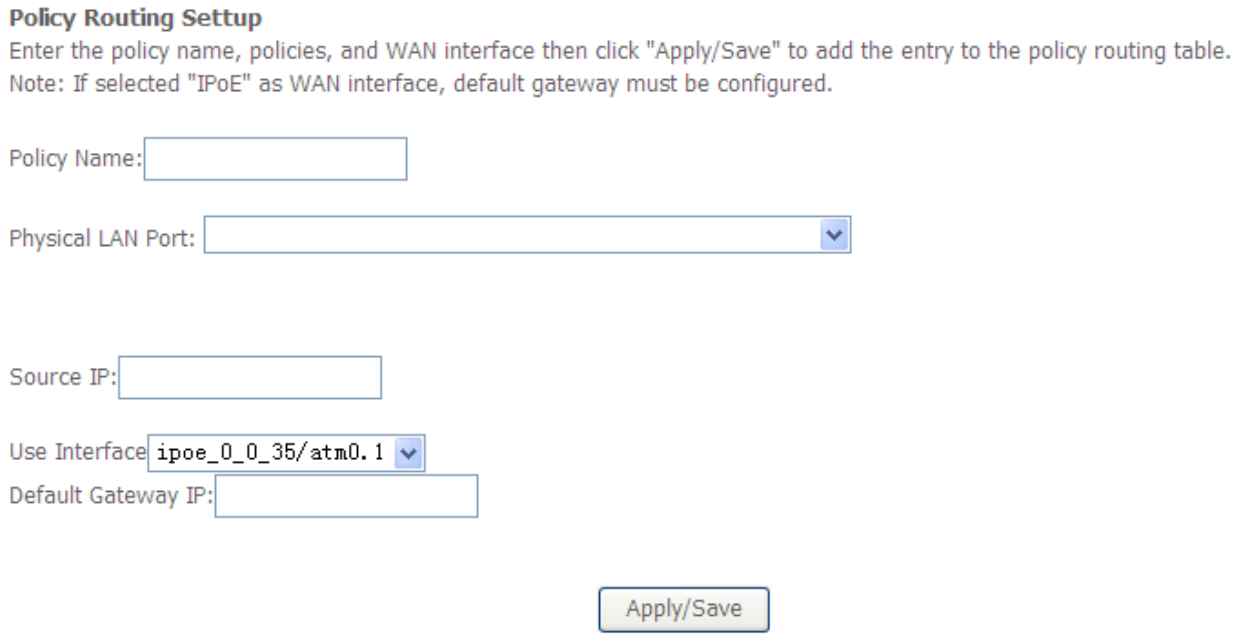


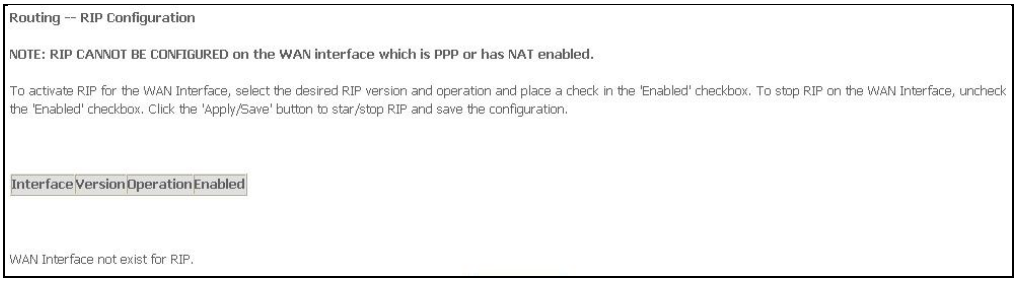
Table 5-66 describes the fields of the Policy Routing Setup window.

Table 5-66 Field descriptions

Field	Description
Policy Name	Enter a name for the policy.
Physical LAN Port	Select a LAN port.
Source IP	Enter the source IP.
Use Interface	Select a routing WAN interface.
Default Gateway	Enter the default gateway.
Save/Apply	Click to save changes.

RIP

To activate RIP for the device, select the **Enabled** radio button for Global RIP Mode. To configure an individual interface, select the desired RIP version and operation, followed by placing a check in the 'Enabled' checkbox for the interface. Click the **Save/Apply** button to save the configuration, and to start or stop RIP based on the Global RIP mode selected.

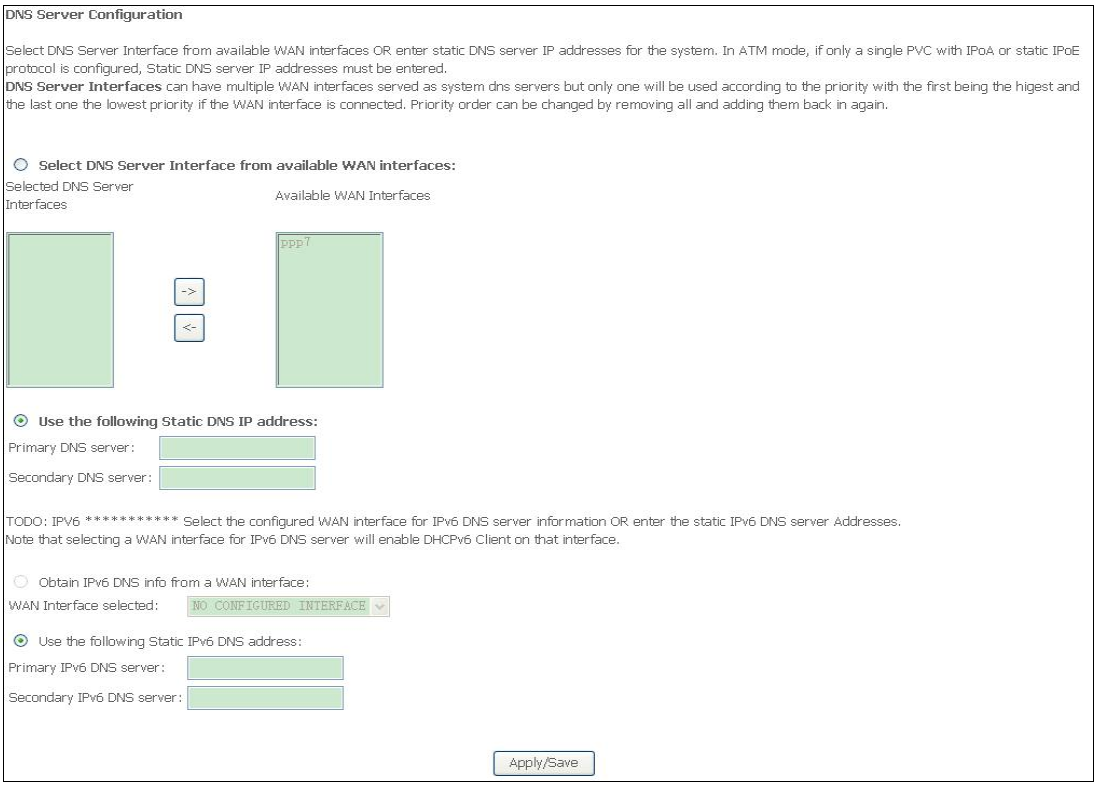


DNS

To access the **DNS** windows, click the **DNS** button in the **Advanced Setup** directory. The **DNS** button appears when configuring WAN interface in PPPoA, PPPoE, MER or IPoA.

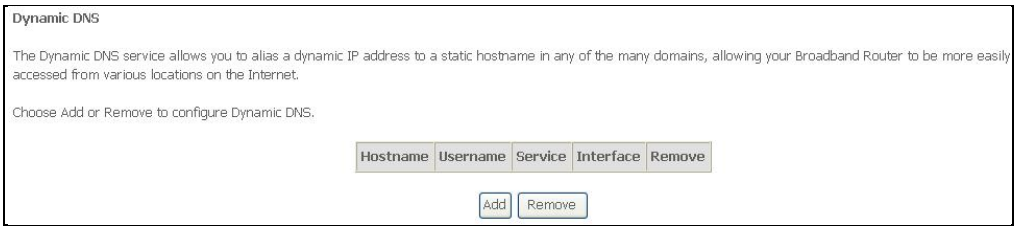
DNS Server

Select DNS Server Interface from available WAN interfaces OR enter static DNS server IP addresses for the system. In ATM mode, if only single PVC with IPoA or static IPoE protocol is configured, Static DNS server IP addresses must be entered.
DNS Server Interfaces can have multiple WAN interfaces served as system DNS servers but only one will be used according to the priority with the first being the highest and the last one the lowest priority if the WAN interface is connected. Priority order can be changed by removing all and adding them back in again. Click the **Apply / Save** button when you are finished.

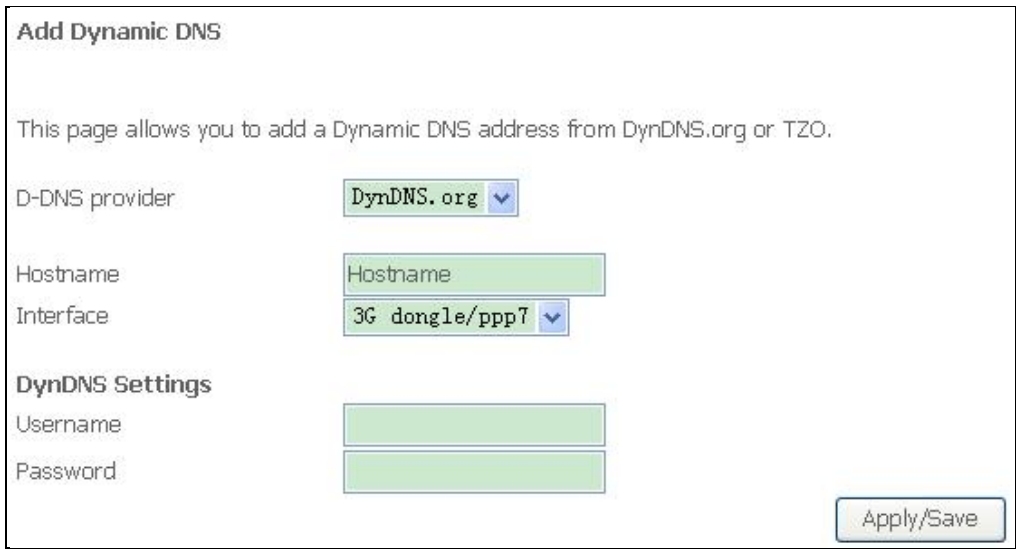


Dynamic DNS

The Router supports Dynamic DNS (Dynamic Domain Name Service). The Dynamic DNS service allows a dynamic public IP address to be associated with a static host name in any of the many domains, allowing access to a specified host from various locations on the Internet. This is enabled to allow remote access to a host by clicking a hyperlinked URL in the form **hostname.dyndns.org**, Many ISPs assign public IP addresses using DHCP, and this can make it difficult to locate a specific host on the LAN using standard DNS. If for example you are running a public web server or VPN server on your LAN, this ensures that the host can be located from the Internet if the public IP address changes. DDNS requires that an account be setup with one of the supported DDNS providers.
Click **Add** to see the Add DDNS Settings section.



Enter the required DDNS information, click the **Apply / Save** button to save the information.



Note

DDNS requires that an account be setup with one of the supported DDNS servers prior to engaging it on the Router. This function will not work without an accepted account with a DDNS server.

DSL

The DSL window enables you to configure the DSL settings of the gateway.

Select **DSL** from the **Advanced Setup** menu to open the DSL Settings window; see Figure 5-67.

Figure 5-67 DSL Settings window

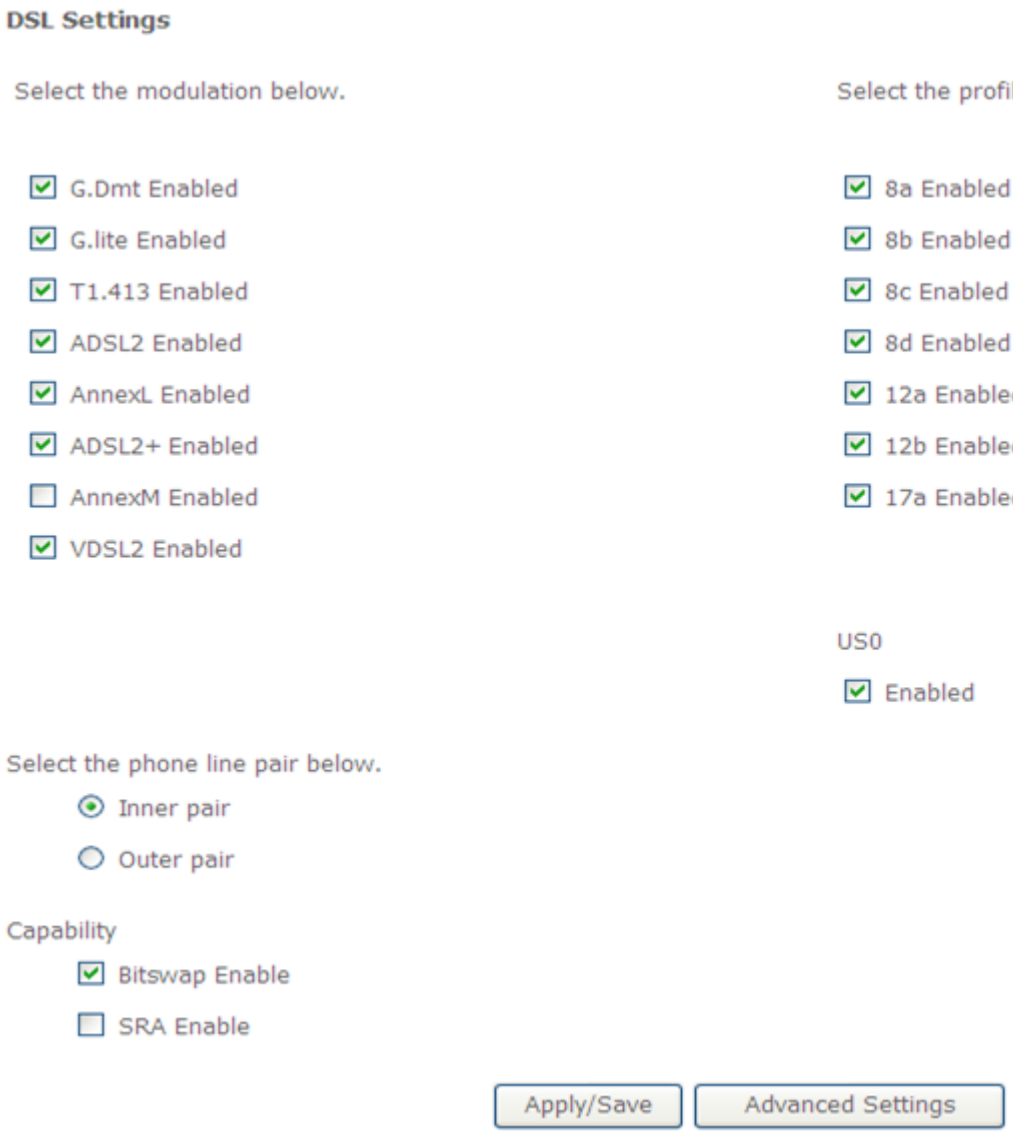


Table 5-68 describes the fields of the DSL Settings window.

Table 5-68 Field descriptions

Field	Description
Select the modulation below	Enable the applicable modulation(s).
Select the profile below	Enable the applicable profile(s).
US0	Enable to apply US0.
Select the phone line pair below	Select the phone line pair: • **Inner pair**

Field	Description
	• **Outer pair**
Capability	Enable the DSL capability: • **Bitswap Enable** • **SRA Enable**
Apply/Save	Click to save changes.
Advanced Settings	Click to open the DSL Advanced Settings window.

If you clicked **Advanced Settings** in the **DSL Settings** window, the DSL Advanced Settings window opens; see Figure 5-69.

Figure 5-69 DSL Advanced Settings window

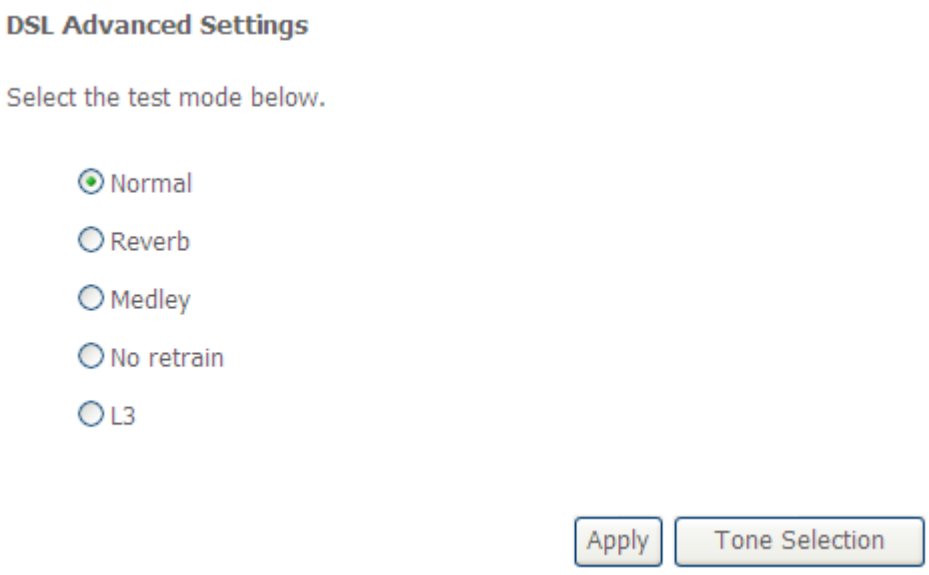


Table 5-70 describes the fields of the DSL Advanced Settings window.

Table 5-70 Field descriptions

Field	Description
Select the test mode below	Select the test mode: • **Normal** • **Reverb** • **Medley** • **No refrain**

	• **L3**
Apply	Click to apply changes.
Tone Selection	Click to select the tone(s). The ADSL Tone Settings window opens.

If you clicked the **Tone Selection** button, the ADSL Tone Settings window opens; see Figure 5-71.

Note: The ADSL tone settings should only be configured with the assistance of your ISP.

Figure 5-71 ADSL Tone Settings window

Table 5-72 describes the fields of the ADSL Tone Settings window.

Table 5-72 Field descriptions

Field	Description
Upstream Tones	Enable or disable the upstream tones.
Downstream Tones	Enable or disable the downstream tones.
Check All	Click to enable all upstream and downstream tones.
Clear All	Click to disable all upstream and downstream tones.
Apply	Click to apply changes.
Close	Click to exit the window.

UPnP

The UPnP Configuration window allows you to enable or turn off UPnP protocol.

Select **UPnP** from the **Advanced Setup** menu to open the UPnP Configuration window; see Figure 5-73.

Figure 5-73 UPnP window

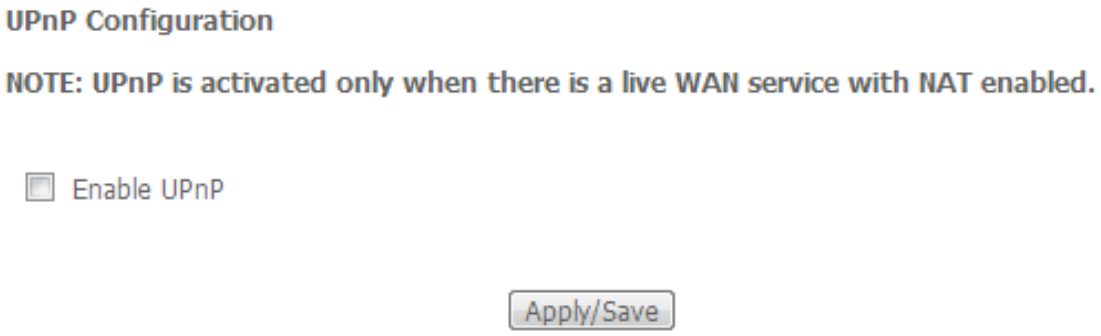


Table 5-74 describes the fields of the UPnP Configuration window.

Table 5-74 Field descriptions

Field	Description
Enable UPnP protocol	Enable to turn on UPnP protocol.
Apply/Save	Click to save changes.

DNS Proxy

The DNS Proxy Configuration window enables you to enable and configure DNS proxy.

Select **DNS Proxy** from the **Advanced Setup** menu to open the DNS Proxy Configuration window; see Figure 5-75.

Figure 5-75 DNS Proxy window

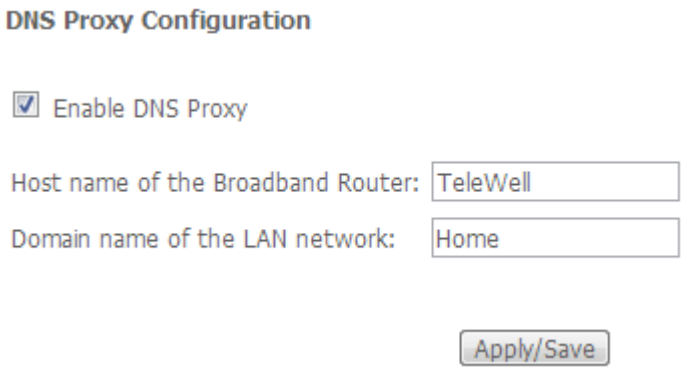


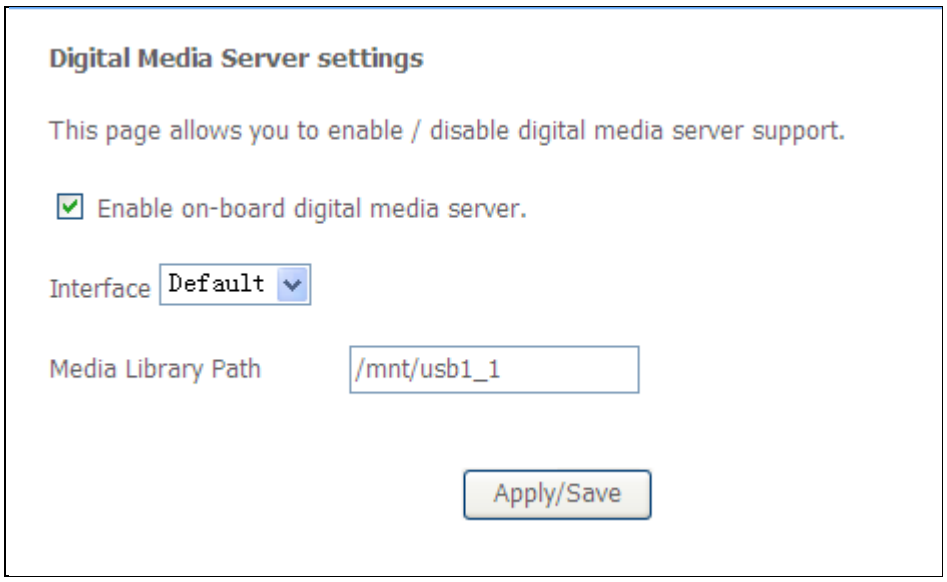
Table 5-76 describes the fields of the DNS Proxy Configuration window.

Table 5-76 Field descriptions

Field	Description
Enable DNS Proxy	Enable to turn on DNS proxy.
Host name of the modem	Enter the host name of the modem.
Domain name of the LAN network	Enter the domain name of the LAN network,
Apply/Save	Click to save changes.

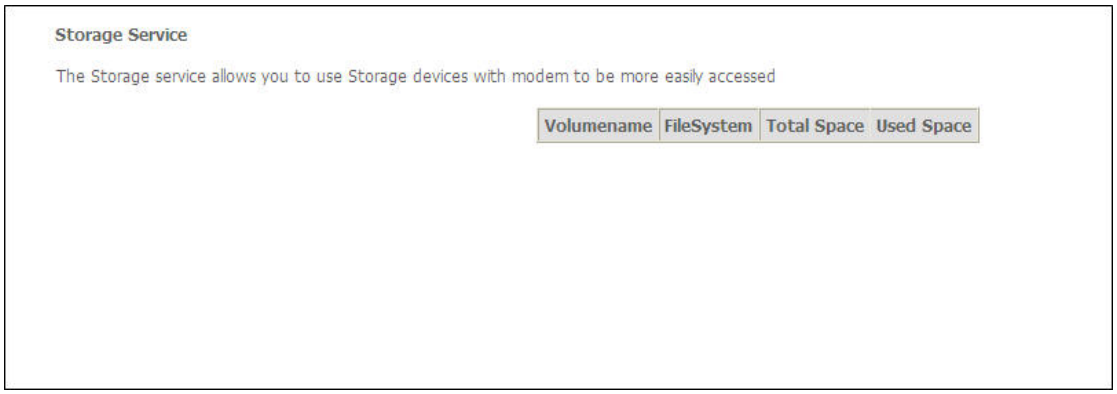
DLNA

Select **DLNA** from the **Advanced Setup** menu to open the DLNA window. This window allows you to config DLNA function. Click the **Apply / Save** button when you are finished.



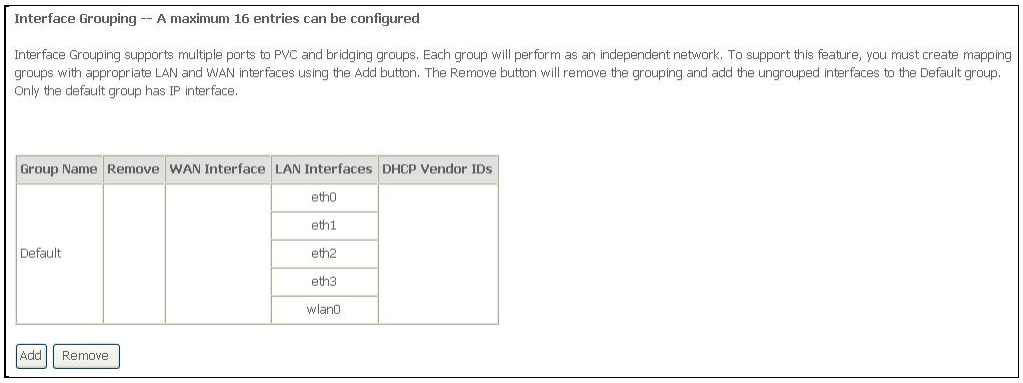
Storage service

The Storage Service window displays Storage Device information from USB interface. Select **Storage Service** from the **Advanced Setup** menu to open the Storage Service window

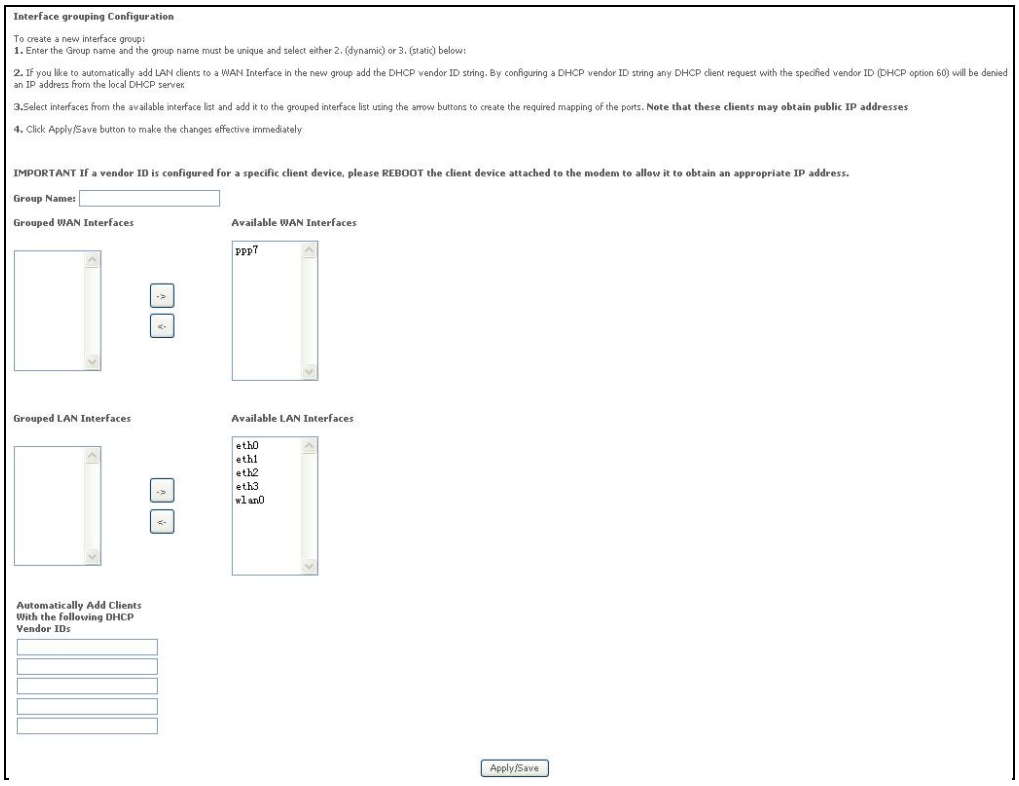


Interface Grouping

Interface Group supports multiple ports to PVC and bridging groups. Each group will perform as an independent network.
To support this feature, you must create mapping groups with appropriate LAN and WAN interfaces using the Add button. The Remove button will remove the grouping and add the ungrouped interfaces to the Default group. Only the default group has IP interface.
Click **Add** to do advanced settings.



To create a new mapping group, enter **Group Name**, add interfaces to **Grouped Interfaces**. Click **Apply / Save** to save the changes.

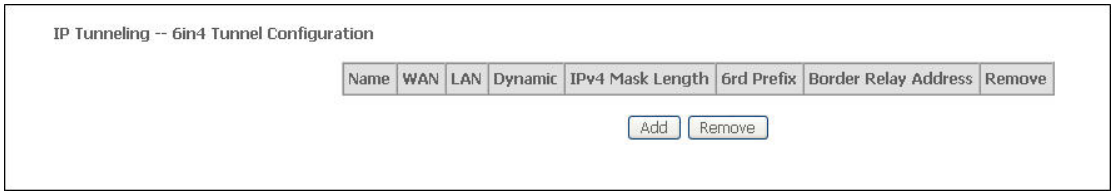


IP Tunnel

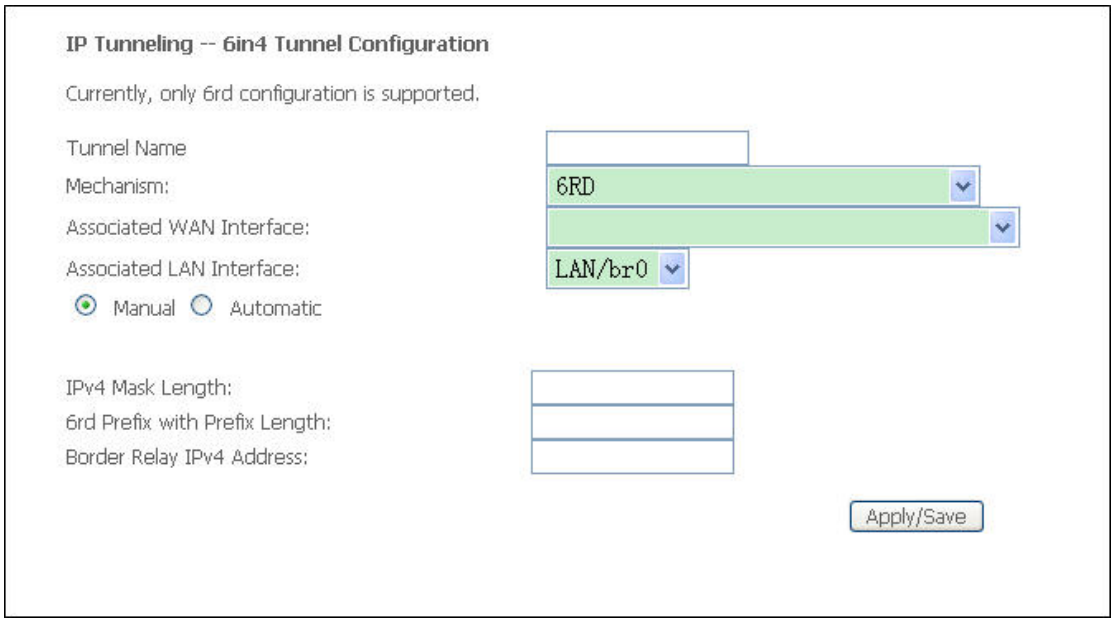
Select **IP Tunnel** from the **Advanced Setup** menu to open the IP Tunnel submenu.

IPv6inIPv4

Select **IPv6inIPv4** from the **IP Tunnel** submenu to open the IP Tunneling-6in4 Tunnel Configuration window

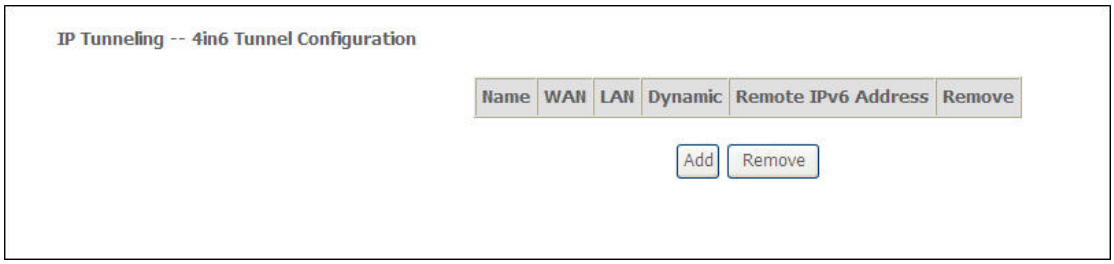


If you click **Add**, the detail of the IP Tunneling-6in4 Tunnel Configuration window will open

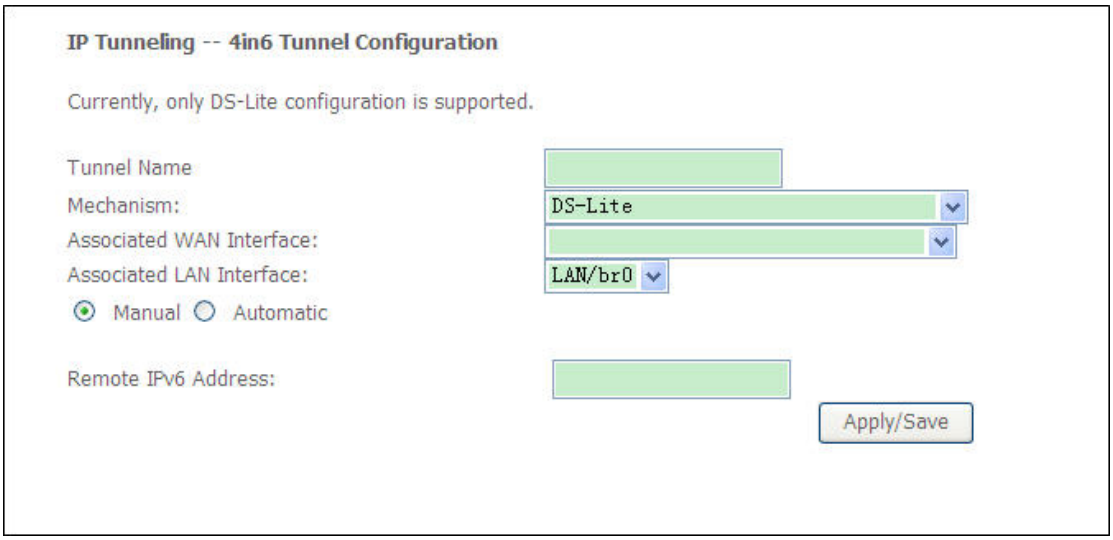


IPv4inIPv6

Select **IPv4inIPv6** from the **IP Tunnel** submenu to open the IP Tunneling-4in6 Tunnel Configuration window;



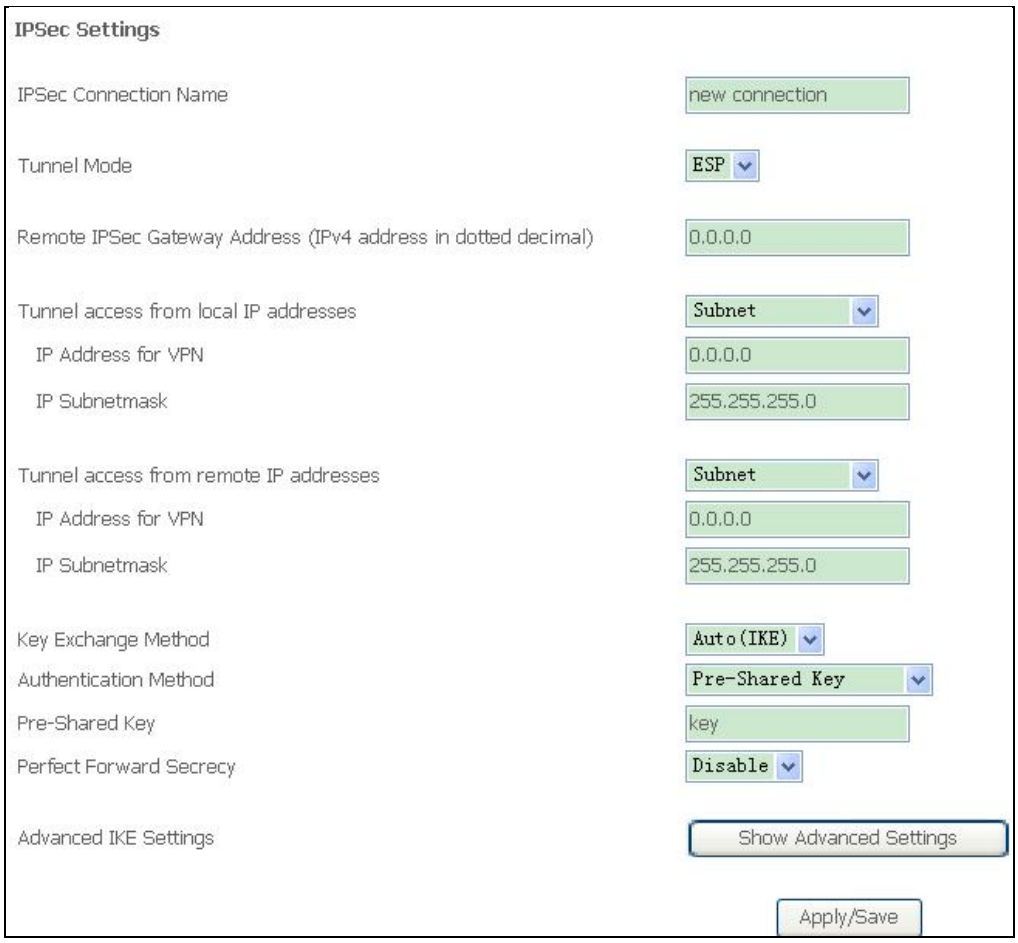
If you click **Add**, the detail of the IP Tunneling-4in6 Tunnel Configuration window will open



IPSec

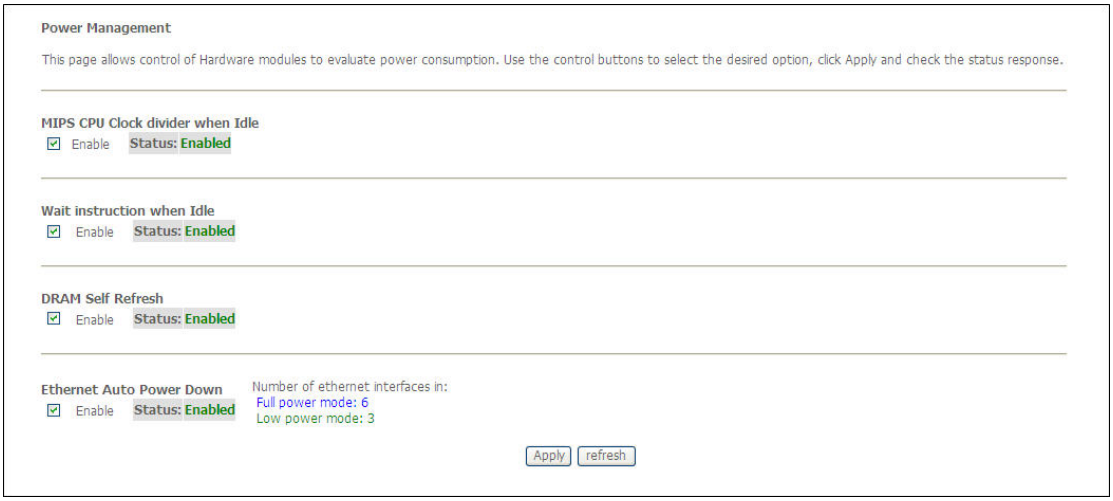
To access the **IPSec Tunnel Mode Connections** window, click the **IPSec** button in the **Advanced Setup** directory.
This window allows you to configure **IPSec**.
Click **Add New Connection** to edit IPSec tunnel mode connections from this page

This window allows you to advanced settings.


IPSec Settings
IPSec Connection Name
new connection
Tunnel Mode
ESP
Remote IPSec Gateway Address (IPv4 address in dotted decimal)
0.0.0.0
Tunnel access from local IP addresses
Subnet
IP Address for VPN
0.0.0.0
IP Subnetmask
255.255.255.0
Tunnel access from remote IP addresses
Subnet
IP Address for VPN
0.0.0.0
IP Subnetmask
255.255.255.0
Key Exchange Method
Auto(IKE)
Authentication Method
Pre-Shared Key
Pre-Shared Key
key
Perfect Forward Secrecy
Disable
Advanced IKE Settings
Show Advanced Settings
Apply/Save

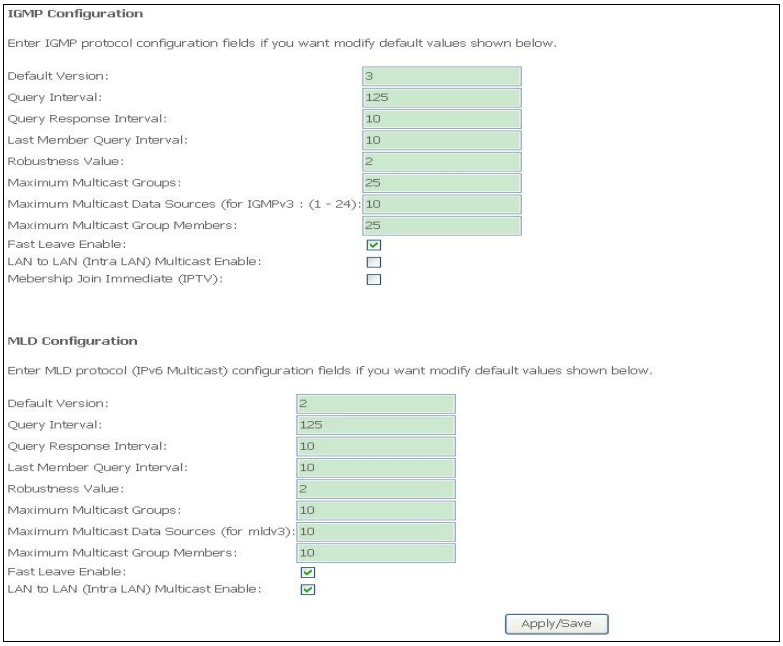
Power Management

The Power Management window enables you to control of Hardware to evaluate power consumption. Select **Power Management** from the **Advanced Setup** menu to open the Power Management window



Multicast

To access the **IGMP Configuration** window, click the **Multicast** button in the **Advanced Setup** directory. Enter IGMP protocol configuration fields if you want modify default values shown below.



6 Wireless

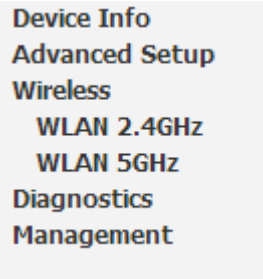
Overview

Purpose

This chapter explains the Wireless setting of the TW-EAV510 AC Router.

Click **Wireless** in the main menu to Wireless configure menu.

Figure6-1 Wireless menu



WLAN 2.4GHz is menu to configure 2.4G wireless network which is also called 802.11n wireless network. WLAN 5GHz is menu to configure 5G wireless network which is also called 802.11ac wireless network.2.4G and 5G have the same contents. So we introduce 802.11n (2.4G) configuration for example.

Contents

This chapter covers the same following topics:

Basic setting	
Security Setting	
MAC Filter	
Wireless Bridge	

Wireless Advanced	
Station	

Basic Setting

The Basic window enables you to do basic setting of the TW-EAV510 AC Router Wireless.

Click **Basic** in the main menu to open the basic setting window; see Figure 6-1.

Figure 6-2 Wireless basic setting Info window

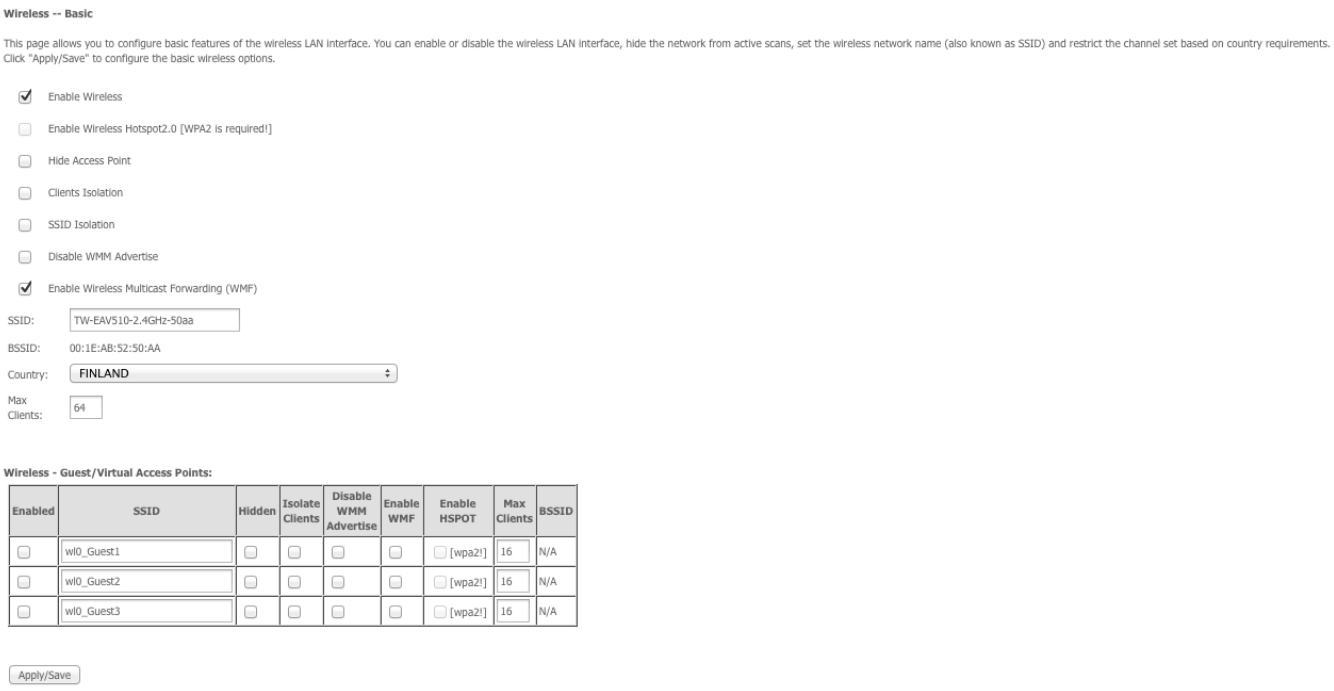


Table 6-2 describes the fields of the Wireless basic setting window.

Table6-1 Field descriptions

Field	Description
Enable Wireless	A checkbox that enables (default) or disables the wireless LAN interface. When selected, the web GUI displays Hide access point, SSID, BSSID and Country settings.
Hide Access Point	Select Hide access Point to protect the access point from detection by wireless active scans. To check AP status in Windows XP, open Network Connections from the start Menu and select View Available Network Connections. If the access point is hidden, it will not be listed there. To connect a client to a hidden access point, the station must add the access point manually to its wireless configuration.
Clients Isolation	1. Prevents clients PC from seeing one another in My Network Places or Network Neighborhood. 2. Prevents one wireless client communicating with another wireless client.
Disable WMM Advertise	Stops the router from 'advertising' its Wireless Multimedia (WMM) functionality, which provides basic quality of service for time-sensitive applications (e.g. VoIP, Video).
Enable Wireless Multicast Forwarding (WMF)	Stops the router from 'advertising' its Wireless Multimedia (WMM) functionality, which provides basic quality of service for time-sensitive applications (e.g. VoIP, Video).
SSID	Sets the wireless network name. SSID stands for Service Set Identifier. All stations must be configured with the correct SSID to access the WLAN. If the SSID does not match, that user will not be granted access.
BSSID (read-only)	The BSSID is a 48bit identity used to identify a particular BSS (Basic Service Set) within an area. In Infrastructure BSS networks, the BSSID is the MAC (Media Access Control) address of the AP (Access Point) and in Independent BSS or ad hoc networks, the BSSID is generated randomly
Country	A drop-down menu that permits worldwide and specific national settings. Each country listed below enforces specific regulations limiting channel range:
Max Clients	The Guest SSID (Virtual Access Point) can be enabled by selecting the Enable Wireless Guest Network checkbox. Rename the Wireless Guest Network as you wish. Note: Remote wireless hosts cannot scan Guest SSIDs.

Security Setting

This page allows you to configure security features of the wireless LAN interface. This page separate 2 areas: WSC setting manual Setting, click **Security** in the main menu to open the basic setting window; see Figure 6-3

Figure 6-3 Wireless security setting Info window

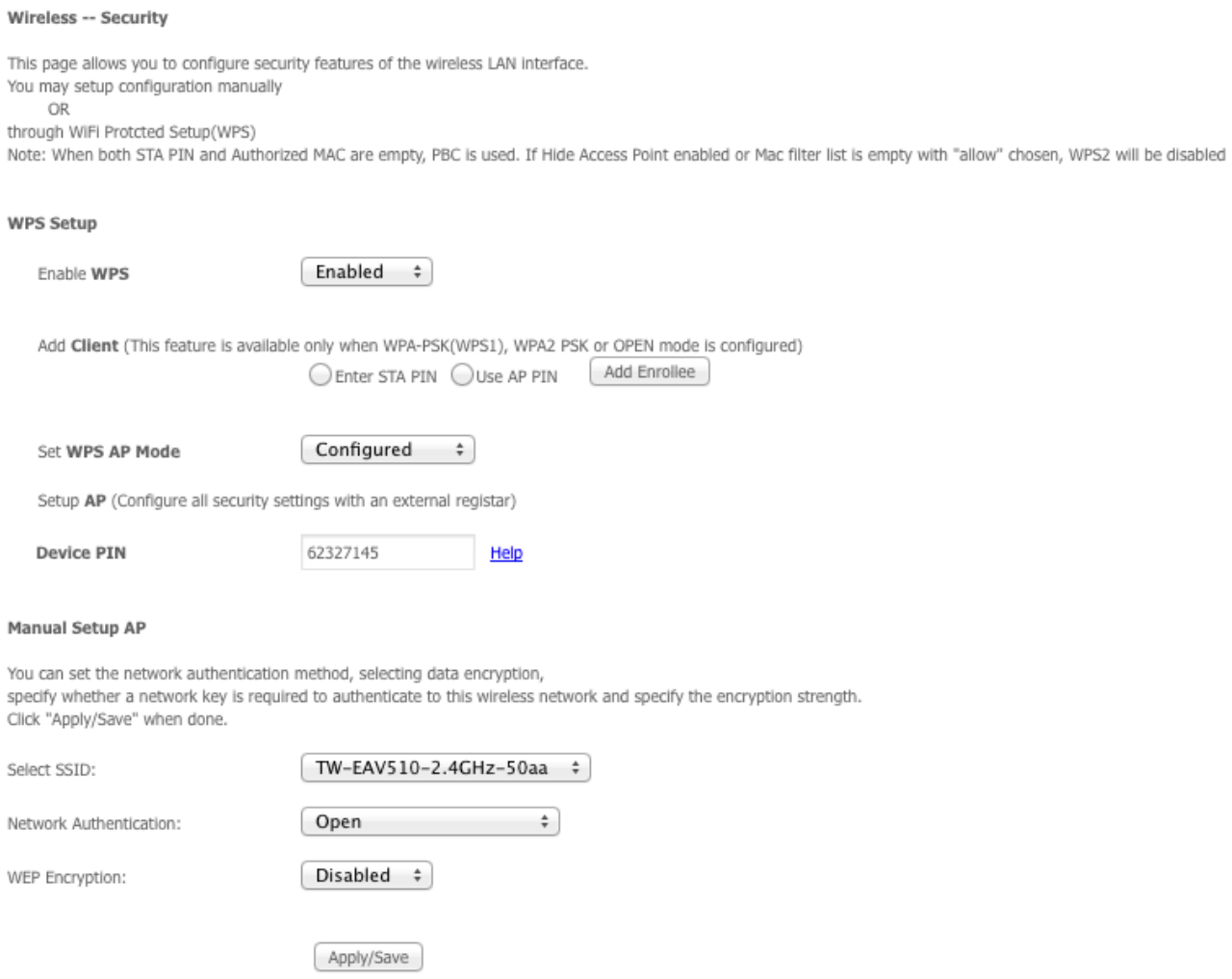


Table6-4 describes the fields of the Wireless Security setting window.

Table6-4 Field descriptions

Field	Description
Enable WSC	Enable or Disable WPS setting
Set **WSC AP Mode**	Configured of un-configured WSC AP mode

Field	Description
Device PIN	Device Pin is generated by AP
Select SSID:	SSID used currently
Network Authentication	Network Authentication used for client link to AP, include WEP encryption, Shared, 802.1x, WPA, and WPA2 authentication.
WEP Encryption	Enable or Disable WEP Encryption

Select **Enabled** of the WEP encryption list. You can enter WEP encryption page. See Figure 6-5.

Figure 6-5 Wireless WEP encryption setting Info window

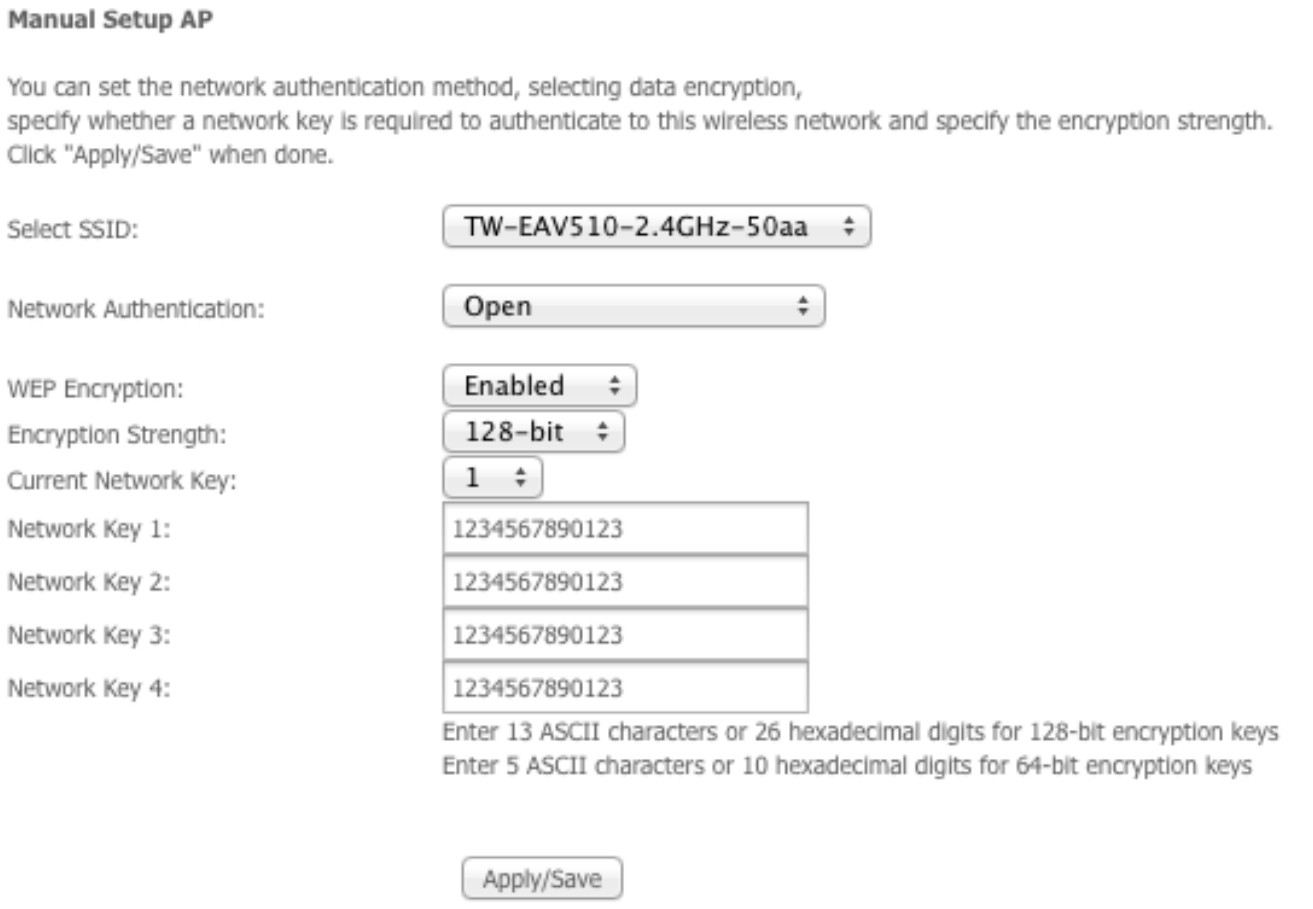


Table6-6 describes the fields of the Wireless WEP encryption setting window.

Table6-6 Field descriptions

Field	Description
Encryption Strength	Key length: 128bits or 64bits
Network Key 1-4	Up to four keys that are in form of hex digitals could be set. Mobile users can't access the AP if they haven't set the same key as AP. For 64bits and 128bits keys, you should input 10 and 26 hexadecimal digitals or 5 and 13 ASCII characters respectively. Every two digitals should be compared with others by a space character. For example: "7890ABCDEF" (hexadecimal digitals) or "QWERT" (ASCII characters) for a key length of 64bits.

Select **802.1x** to enter 802.1x authentication page. The 802.1x authentication needs a Radius server in LAN. In this page, you can input Radius server IP address, port number and secret key see Figure 7-7.

Figure 6-7 Wireless WEP encryption setting Info window

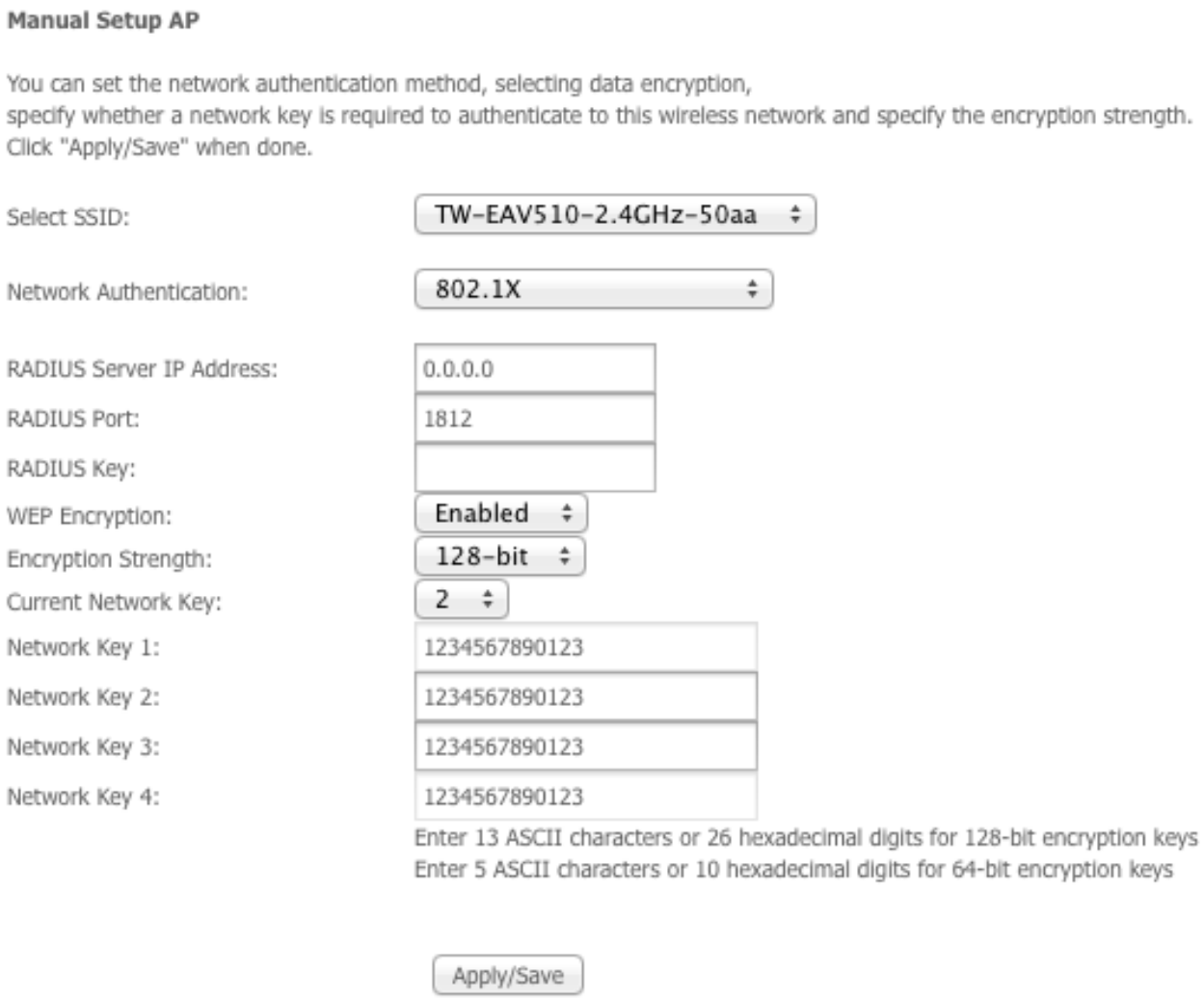


Table6-8 describes the fields of the Wireless 802.1x setting window.

Table6-8 Field descriptions

Field	Description
RADIUS Server IP Address	IPv4 of Radius server
RADIUS Port	Radius server port, default value is 1812
RADIUS Key	Key string used to Radius authentication

MAC Filter

The Access List function is just like MAC address filtering and selected to permit or forbid access of wireless station with specified MAC address. Click **MAC Filter** in the main menu to open the MAC filter window; see Figure 6-9.

Figure 6-9 Wireless MAC Filter setting Info window

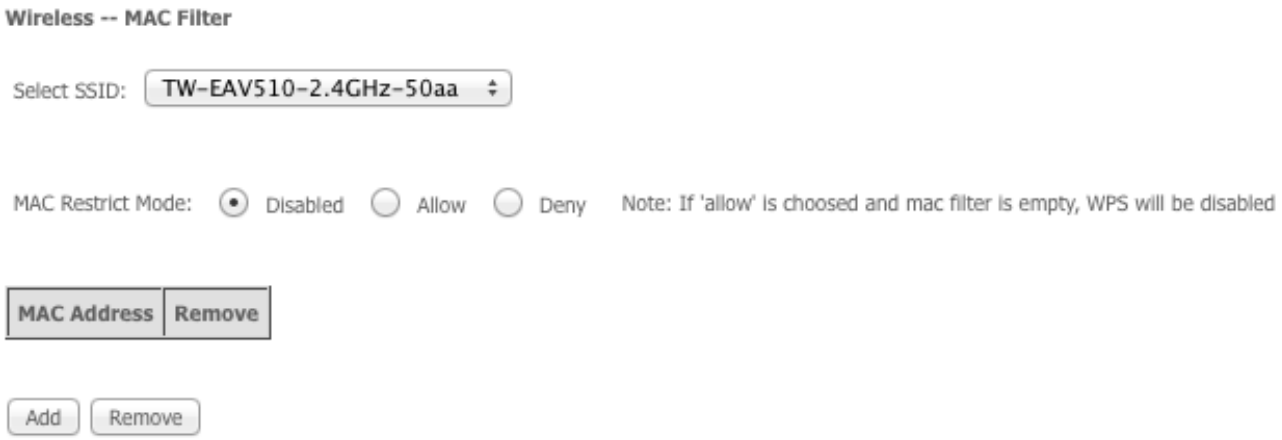


Table6-10 describes the fields of the Wireless MAC filter setting window.

Table 6-10 Field descriptions

Field	Description
Select SSID	SSID current used
MAC Restrict Mode	Disabled – Disables MAC filtering Allow: Permits access for the specified MAC addresses NOTE: Add a wireless device's MAC address before clicking the Allow radio button or else you will need to connect to the Router's web user interface using the supplied yellow Ethernet cable and add

Field	Description
	the wireless device's MAC address.
Deny	Rejects access for the specified MAC addresses
MAC Address	Lists the MAC addresses subject to the MAC Restrict mode. The **Add** button prompts an entry field that requires you type in a MAC address in a two-character, 6-byte convention: xx:xx:xx:xx:xx:xx where xx are hexadecimal numbers. A maximum of 60 MAC addresses can be added.

Wireless Bridge

You can select Wireless Bridge (also known as Wireless Distribution System) to disable access point functionality.
Selecting Access Point enables access point functionality.
Wireless bridge functionality will still be available and wireless stations will be able to associate to the AP. Select Disabled in Bridge Restrict which disables wireless bridge restriction. Any wireless bridge will be granted access. Selecting Enabled or Enabled (Scan) enables wireless bridge restriction. Only those bridges selected in Remote Bridges will be granted access. Click **Wireless Bridge** in the main menu to open the Wireless bridge window see Figure 6-11.

Figure 6-11 Wireless Bridge setting Info window

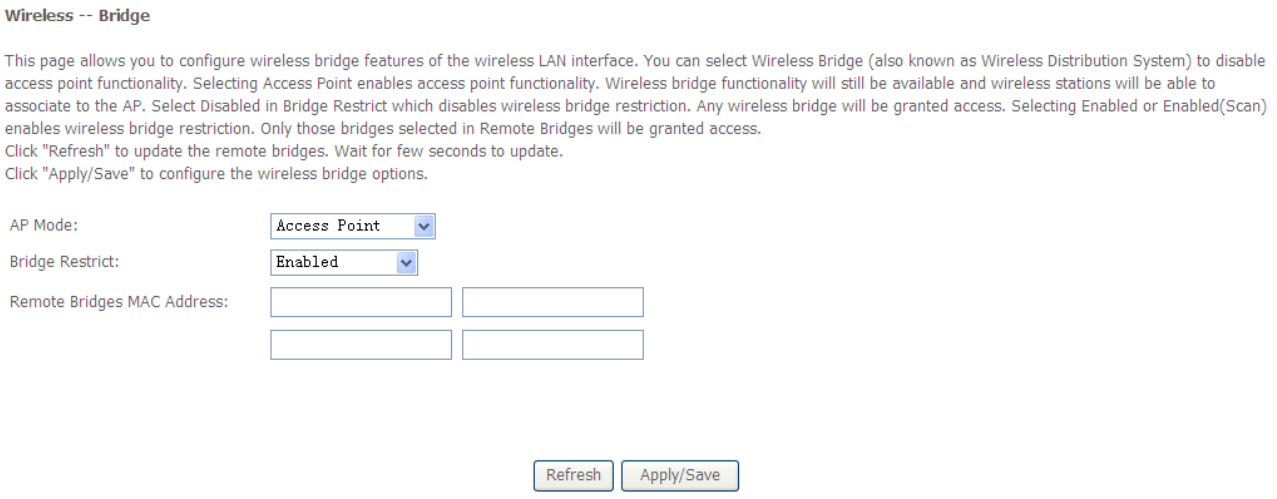


Table6-12 describes the fields of the Wireless bridge setting window.

Table6-12 Field descriptions

Field	Description
AP Mode	Selecting Wireless Bridge (Wireless Distribution System) disables Access Point (AP) functionality while selecting access Point enables AP functionality. In access Point mode, wireless bridge functionality will still be available and wireless stations will be able to associate to the AP.
Bridge Restrict	Selecting Disabled in Bridge Restrict disables wireless Bridge restriction, which means that any wireless bridge will be granted access. Selecting Enabled or Enabled (Scan) allows wireless bridge Restriction. Only those bridges selected in Remote Bridges will be granted access. Click Refresh to update the station list when Bridge Restrict is enabled.
Remote Bridges MAC Address	MAC address list

Wireless Advanced

In advanced setting page, You can select a particular channel on which to operate, force the transmission rate to a particular speed, set the fragmentation threshold, set the RTS threshold, set the wakeup interval for clients in power-save mode, set the beacon interval for the access point, set XPress mode and set whether short or long preambles are used, click **Advanced** in the main menu to open the Wireless advanced window. See Figure 6-13 for wl1 information.

Figure 6-13 Wireless advanced setting Info window

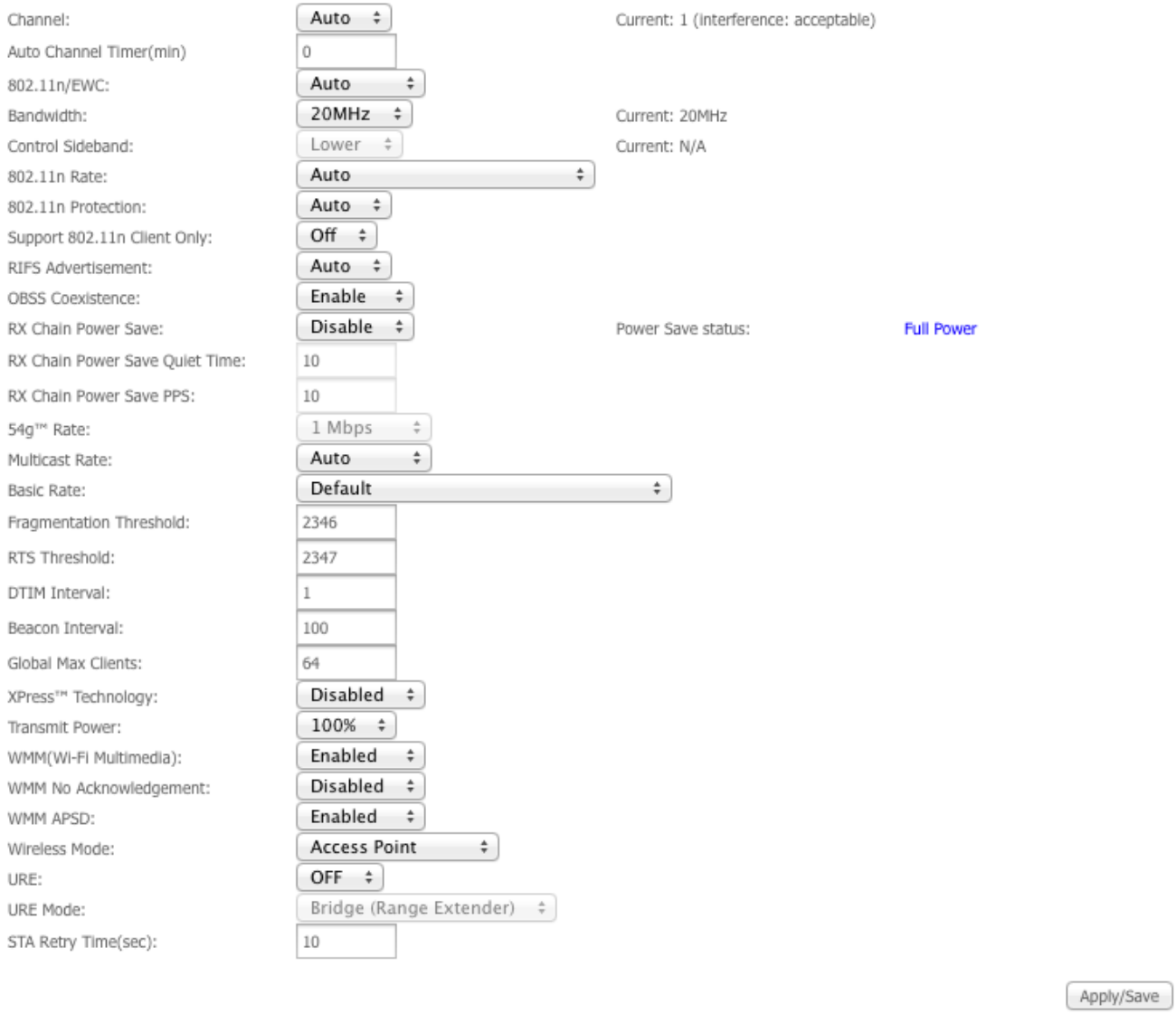


Table 7-14 describes the fields of the Wireless advance setting window.

Table7-14 Field descriptions

Field	Description
Band	The frequency of 802.11ac Wireless Network, the new amendment allows IEEE 802.11a units to fall back to speeds of 54 Mbps coexist in the same network.
Channel	Allows selection of a specific channel or Auto mode.
Auto Channel Timer	The Auto Channel times the length it takes to scan in minutes
802.11n/EWC	An equipment interoperability standard setting based on IEEE 802.11n Draft 2.0 and Enhanced Wireless Consortium (EWC)
Bandwidth	Drop-down menu specifies the following bandwidth: 20MHz in 2.4G Band and 40 MHz in 5G Band, 20MHz in both bands, 40MHz in both band and 80MHz in both band.
Control Sideband	This is available for 40MHz. Drop-down menu allows selecting upper sideband or lower sideband
802.11n Rate	Drop-down menu specifies the following fixed rates. The maximum rate for bandwidth, 20MHz, is 130MHz and the maximum bandwidth, 40MHz, is 270MHz,80M,auto
802.11n Protection	Turn off for maximized throughput. Turn on for greater security
Support 802.11n Client Only	the option to provide wireless Internet access only to clients who are operating at 802.11n speeds
54g™ Rate	In Auto (default) mode, your Router uses the maximum data rate and lowers the data rate dependent on the signal strength. The appropriate setting is dependent on signal strength. Other rates are discrete values between 1 to 54 mbps.
Multicast Rate	Setting for multicast packet transmission rate. (1-54 Mbps)
Basic Rate	Sets basic transmission rate.
Fragmentation Threshold	A threshold (in bytes) determines whether packets will be fragmented and at what size. Packets that exceed the fragmentation threshold of an 802.11 WLAN will be split into smaller units suitable for the circuit size. Packets smaller than the specified fragmentation threshold value however are not fragmented. Values between 256 and 2346 can be entered but should remain at a default setting of

Field	Description
	2346. Setting the Fragmentation Threshold too low may result in poor performance.
RTS Threshold:	Request To Send (RTS) specifies the packet size that exceeds the specified RTS threshold, which then triggers the RTS/CTS mechanism. Smaller packets are sent without using RTS/CTS. The default setting of 2347 (max length) will disables the RTS Threshold.
DTIM Interval	Delivery Traffic Indication Message (DTIM) is also known as Beacon Rate. The entry range is a value between 1 and 65535. A DTIM is a countdown variable that informs clients of the next window for listening to broadcast and multicast messages. When the AP has buffered broadcast or multicast messages for associated clients, it sends the next DTIM with a DTIM Interval value. AP Clients hear the beacons and awaken to receive the broadcast and multicast messages. The default is 1.
Beacon Interval	The amount of time between beacon transmissions in is milliseconds. The default is 100 ms and the acceptable range is 1 – 65535. The beacon transmissions identify the presence of an access point. By default, network devices passively scan all RF channels listening for beacons coming from access points. Before a station enters power save mode, the station needs the beacon interval to know when to wake up to receive the beacon.
Global Max Clients	Here you have the option of setting the limit of the number of clients who can connect to your wireless network
XPress™ Technology	Broadcom's Xpress™ Technology is compliant with draft specifications of two planned wireless industry standards. It has been designed to improve wireless network efficiency. Default is disabled
Transmit Power	the option of decreasing the transmitting power of your wireless signal
WMM(Wi-Fi Multimedia)	You can choose the enable or disable WMM which allows for priority of certain data over the wireless network
WMM No Acknowledgement	Refers to the acknowledge policy used at the MAC level. Enabling No Acknowledgement can result in more efficient throughput but higher error rates in a noisy Radio Frequency (RF) environment

Field	Description
WMM APSD	Automatic Power Save Delivery. Enable this to save power

Station Info

This window shows authenticated wireless stations and their status. Click **Station Info** in the main menu to open the Wireless station info. See Figure 7-15.

Figure 7-15 Wireless station Info window

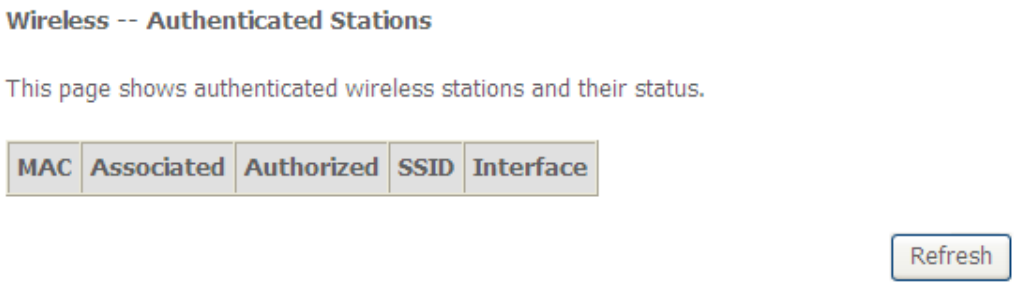


Figure 7-16 describes the fields of the Wireless Station info window.

Table 7-16 Field descriptions

Field	Description
MAC	the MAC address of any connected client
Associated	Lists all the stations that are associated with the access Point, along with the amount of time since packets were transferred to and from each station. If a station is idle for too long, it is removed from this list.
Authorized	Lists those devices with authorized access.
SSID	The SSID of your wireless network
Interface	the wireless interface being used to connect

7 Diagnostics

Overview

Purpose

This chapter explains the diagnostics of the TW-EAV510 AC Router.

Click **Diagnostics** in the main menu to open Diagnostics menu.

Contents

This chapter covers the following topics:

Diagnostics	

Diagnostics

The Diagnostics window enables you to test your local connection and the connection to the DSL service provider.

Select **Diagnostics** from the **Diagnostics** menu to open the Diagnostics window; see Figure 7-1.

Figure 7-1 Diagnostics window

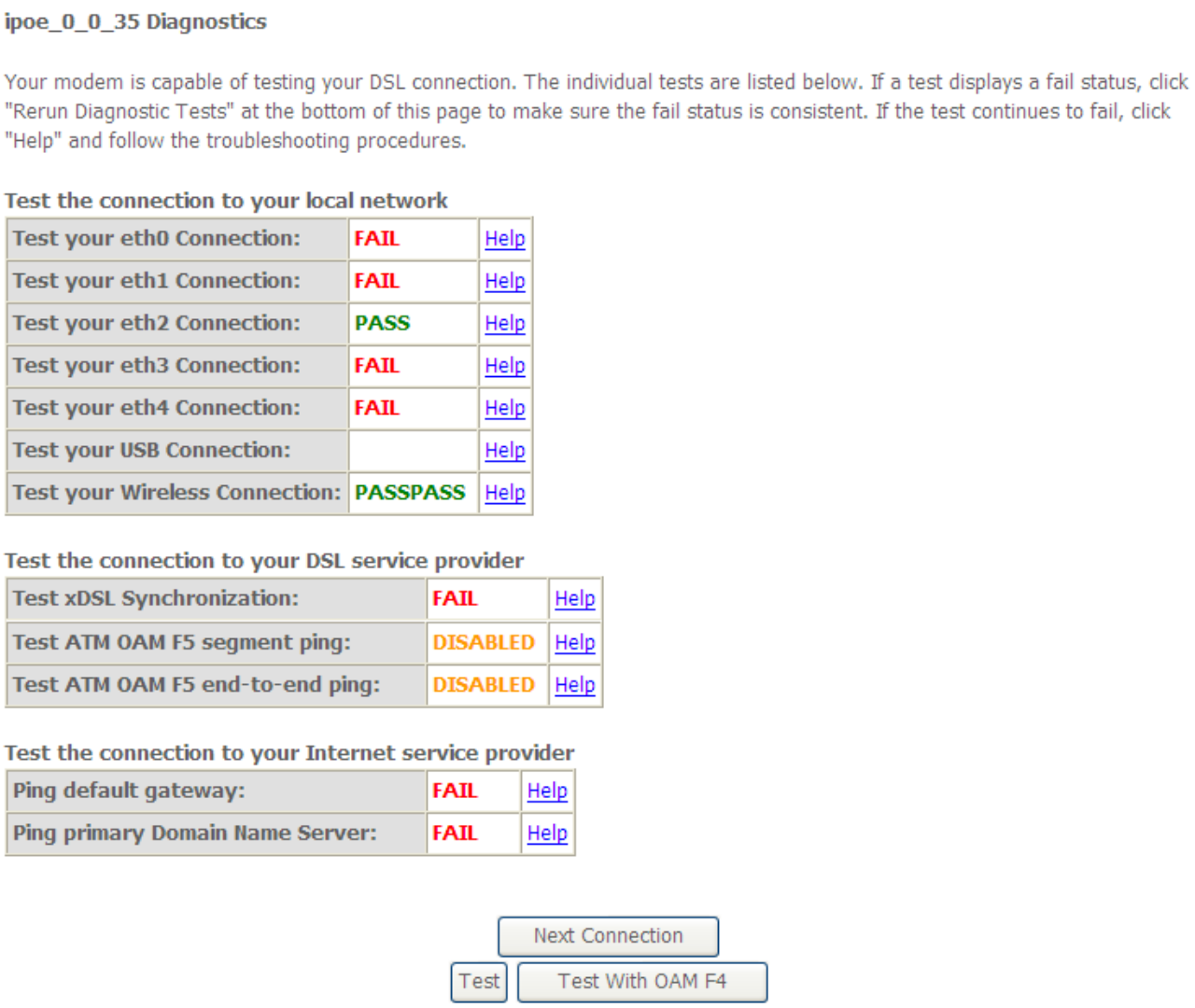


Table 7-2 describes the fields of the Diagnostics window.

Table 7-2 Field descriptions

Field	Description
Test the connection to your local network	Indicates the status of your local connection: • **Pass** • **Fail** • **Disabled** If your local connection continues to fail, click the **Help** link to open a troubleshooting walkthrough.

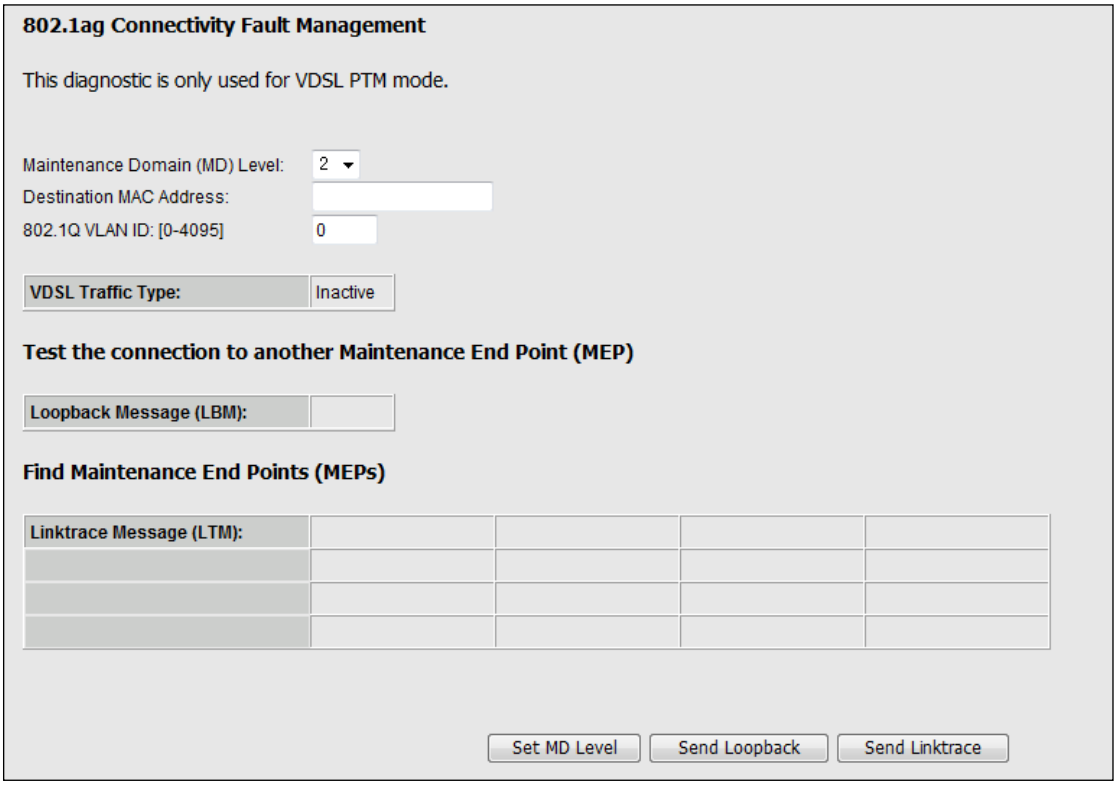
Field	Description
Test the connection to your DSL service provider	Indicates the status of your connection to your DSL service provider: • **Pass** • **Fail** • **Disabled** If your connection to your DSL service provider continues to fail, click the **Help** link to open a troubleshooting walkthrough.
Next Connection	Click to check the status of the next connection.
Test	Click to test the connection.
Test With OAM F4	Click to test the connection with OAM P4.

Fault Management

Fault Management enables you to test the connectivity of the xDSL PTM (VDSL2) mode.

Note: Fault management should only be run with assistance from your ISP.

Select **Fault Management from the Diagnostics menu to open the 802.1ag Connectivity Fault Management window**


802.1ag Connectivity Fault Management
This diagnostic is only used for VDSL PTM mode.
Maintenance Domain (MD) Level:
2
Destination MAC Address:
802.1Q VLAN ID: [0-4095]
0
VDSL Traffic Type:
Inactive
Test the connection to another Maintenance End Point (MEP)
Loopback Message (LBM):
Find Maintenance End Points (MEPs)
Linktrace Message (LTM):
Set MD Level
Send Loopback
Send Linktrace

8 Management

Overview

Purpose

This chapter explains the Management menu of the TW-EAV510 AC Router.

Click **Management** in the main menu to open the Management menu.

Contents

This chapter covers the following topics:

Settings	
System Log	
Security Log	
TR-069 Client	
Internet Time	
Access Control	
Update Software	
Reboot	
Tools	

Settings

The Settings windows enable you to backup, update, and restore the settings of the TW-EAV510 AC Router.

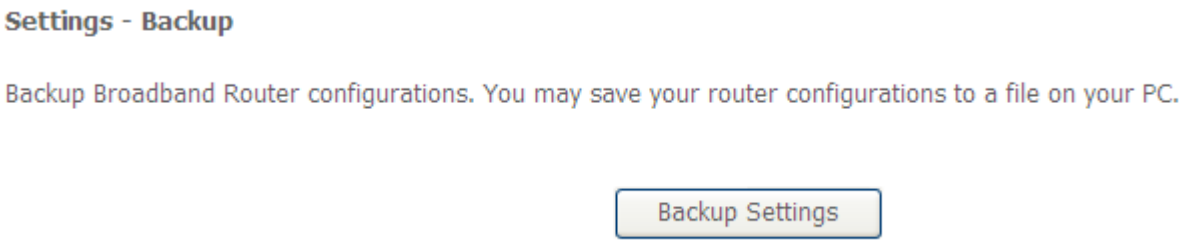
Select **Settings** in the **Management** menu to open the Settings submenu.

Backup

The Backup window enables you to save a backup copy of the settings you have configured for the TW-EAV510 AC Router.

Select **Backup** from the **Settings** submenu to open the Backup window; see Figure 8-1.

Figure 8-1 Backup window



Click **Backup Settings** to save a backup copy of your settings.

Update

The Update Settings window enables you to restore settings from a saved settings file.

Select **Update** from the **Settings** submenu to open the Update Settings window; see Figure 8-2.

Figure 8-2 Update Settings window

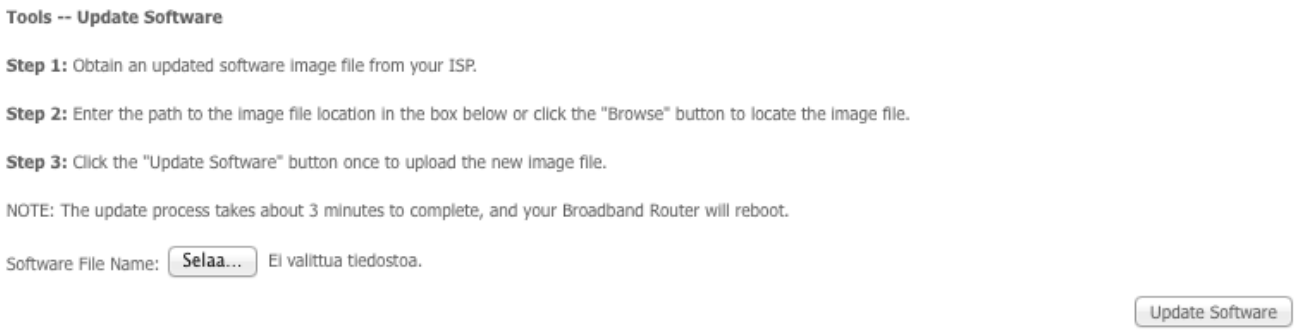


Table 8-1 describes the fields of the Update Settings window.

Table 8-1 Field descriptions

Field	Description
Settings File Name	Enter the file name of the saved settings or click **Browse** to locate the saved settings file.
Update Settings	Click to upload the saved settings file.

Restore Default

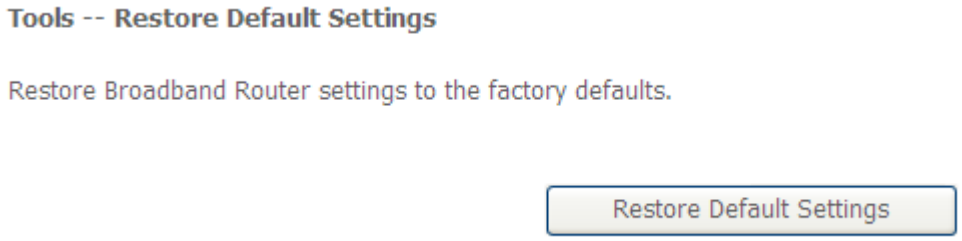
The Restore Default Settings window enables you to restore the factory defaults of the TW-EAV510 AC Router.

Warning

Restoring the default settings will erase all previous settings.

Select **Restore Default** from the **Settings** submenu to open the Restore Default Settings window; see Figure 8-3.

Figure 8-3 Restore Default Settings window



Click **Restore Default Settings** to restore the factory default settings of the TW-EAV510 AC Router.

System Log

The System Log windows enable you view and configure the system log of the TW-EAV510 AC Router.

Select **System Log** in the **Management** menu to open the System Log window; see Figure 8-4.

Figure 8-4 System Log window

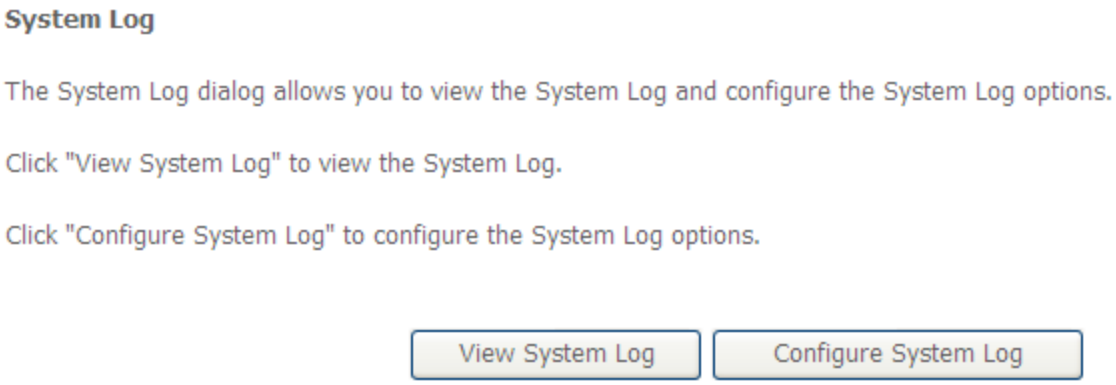


Table 8-5 describes the fields of the System Log window.

Table 8-5 Field descriptions

Field	Description
View System Log	Click to view the system log. The System Log information window opens.
Configure System Log	Click to configure the system log. The Configuration window opens.

If you clicked **View System Log** in the **System Log** window, the System Log information window opens; see Figure 8-6.

Figure 8-6 System Log information window

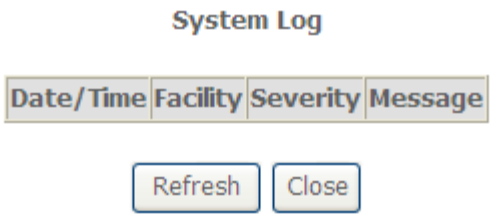


Table 8-7 describes the fields of the System Log information window.

Table 8-7 Field descriptions

Field	Description
Date/Time (read-only)	The date and time of the log entry.

Field	Description
Facility (read-only)	The facilitator of the log entry.
Severity (read-only)	The severity level of the log entry.
Message (read-only)	The details of the log entry.
Refresh	Click to refresh the system log.
Close	Click to close the system log.

If you clicked **Configure System Log** in the **System Log** window, the Configuration window opens; see Figure 8-8.

Note: Configuring the system log should be done with assistance from your ISP.

Figure 8-8 Configuration window

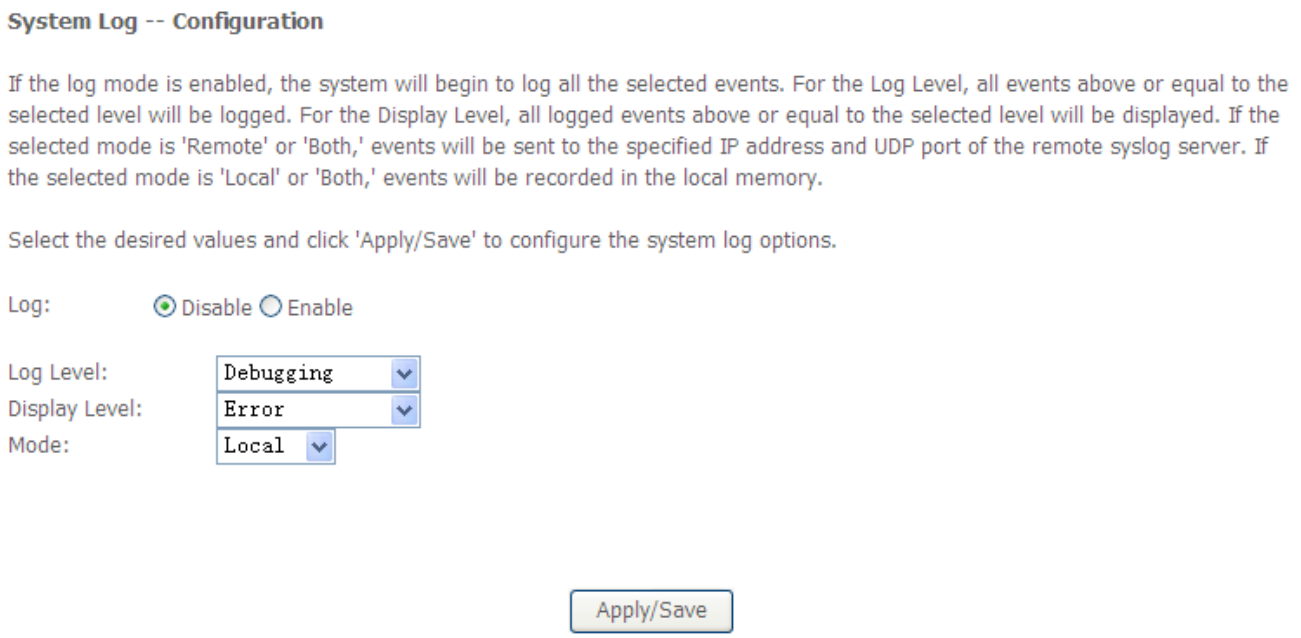


Table 8-9 describes the fields of the Configuration window.

Table 8-9 Field descriptions

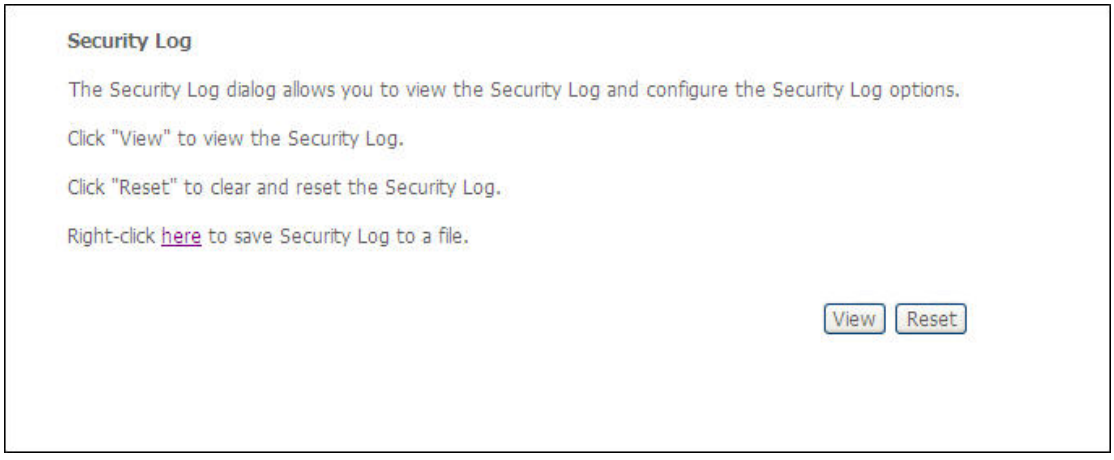
Field	Description
Log	Select to **Enable** or **Disable** the log.
Log Level	Select the log level:

Field	Description
	Emergency Alert Critical Error Warning Notice Informational Debugging
Display Level	Select the display level: Emergency Alert Critical Error Warning Notice Informational Debugging
Mode	Select the mode: Local Remote Both
Apply/Save	Click to save changes.

.

Security Log

The System Log windows enable you view the security log of this device.
Select **Security Log** in the **Management** menu to open the Security Log window;



If you clicked **View** in the **Security Log** window, the Security Log information window opens;

TR-069 Client

The TR-069 Client window enables you to configure the ACS for the TW-EAV510 AC Router.

Select **TR-069 Client** in the **Management** menu to open the TR-069 Client -- Configuration window; see Figure 8-10.

Figure 8-10 TR-069 Client -- Configuration window

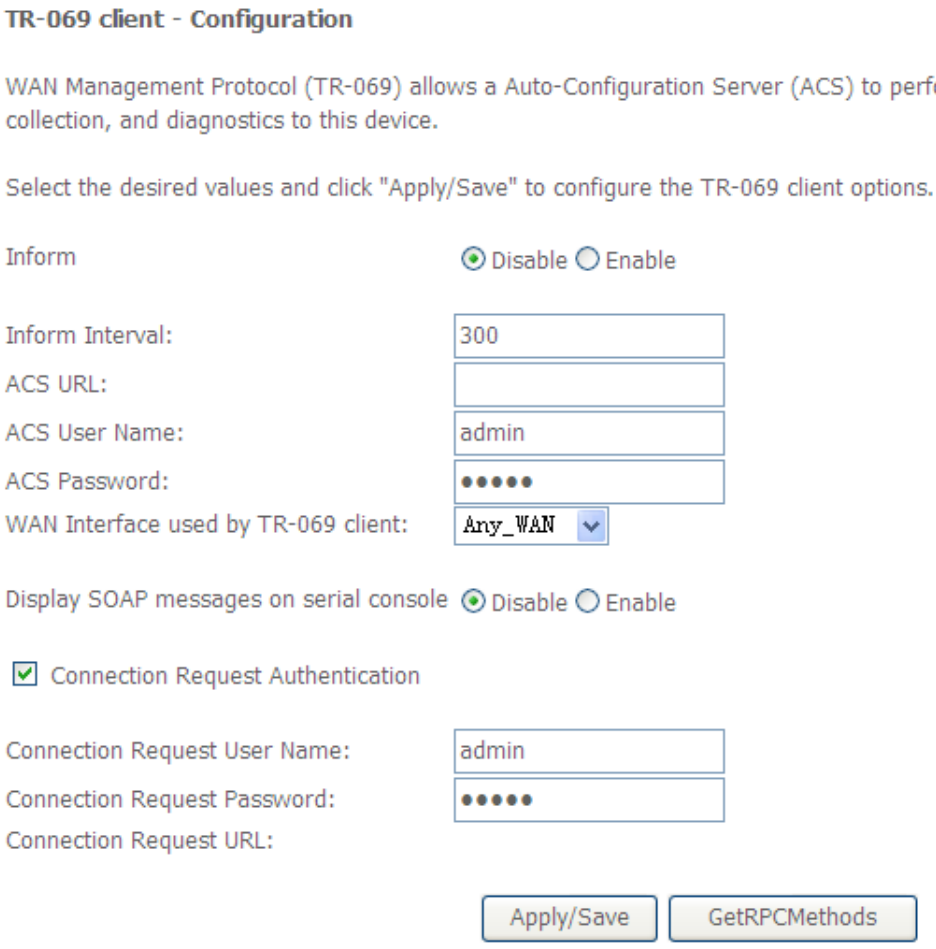


Table 8-11 describes the fields of the TR-069 Client -- Configuration window.

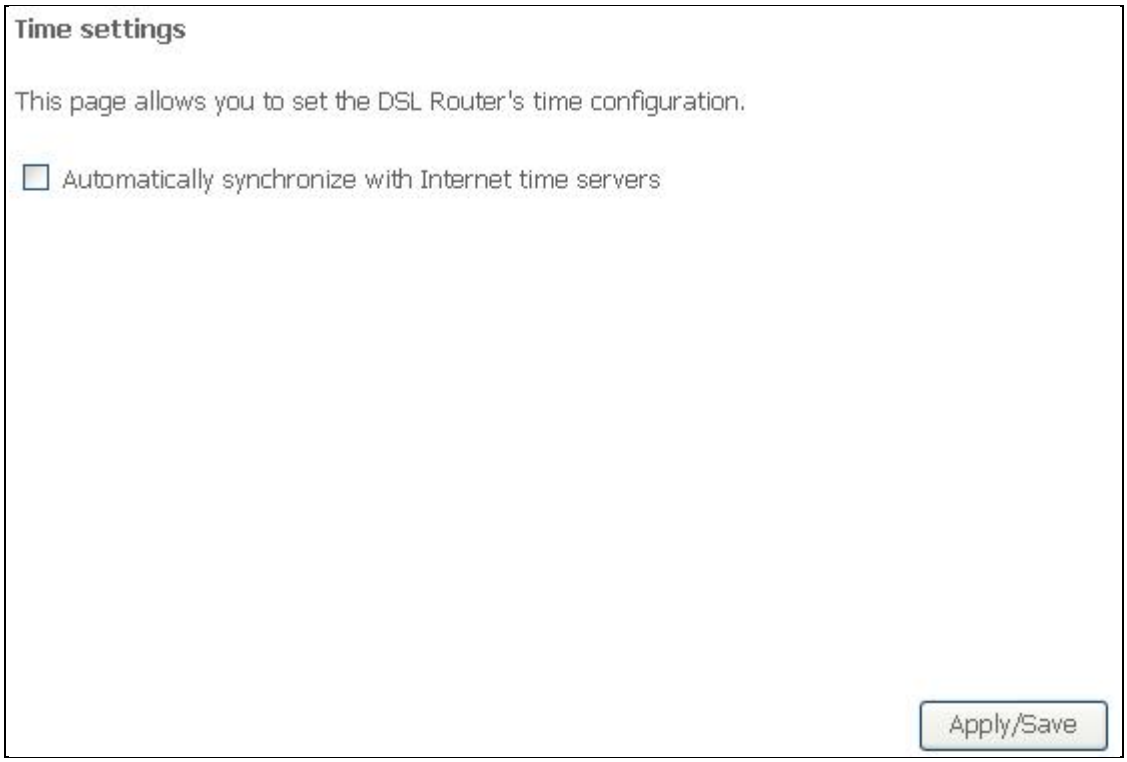
Table 8-11 Field descriptions

Field	Description
Inform	Select to **Enable** or **Disable** sending inform.
Inform Interval	Enter an inform interval in seconds.
ACS URL	Enter the ACS URL.
ACS User Name	Enter the ACS username.
ACS Password	Enter the ACS password.
WAN interface used by TR-069 client	Select the interface for the TR-069 client.
Display SOAP messages on serial console	Select to **Enable** or **Disable** displaying SOAP messages on serial console.

Field	Description
Connection Request Authentication	Enable to require connection request authentication.
Connection Request User Name	Enter the connection request username.
Connection Request Password	Enter the connection request password.
Connection Request URL (read-only)	The connection request URL.
Apply/Save	Click to save changes.
Get RPC Methods	Click to manually start a TR-069 connection.

Internet Time

To access the **Time settings** window, click the **Internet Time** button in the **Management** directory.
This window allows you to set the Router's time configuration. When you are finished, click the **Save/Apply** button.



Access Control

Access Control enables you to configure the passwords of the usernames for the gateway.

Select **Access Control** in the **Management** menu to open the Access Control menu.

Passwords

The Passwords window enables you to configure the admin passwords.

Select **Passwords** from the **Access Control** menu to open the Passwords window; see Figure 8-12.

> **Note:** It is highly recommended that the default passwords are changed after logging in to the device for the first time.

Figure 8-12 Password window

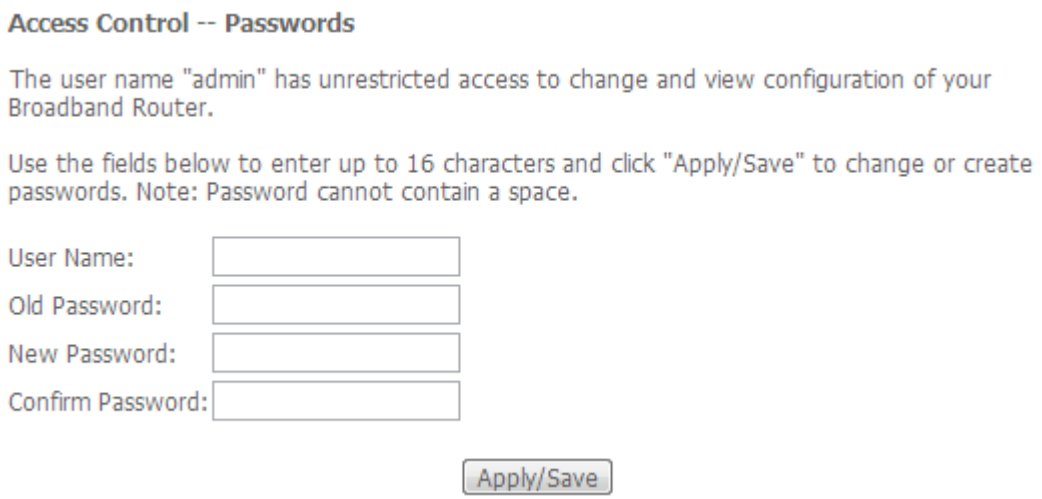


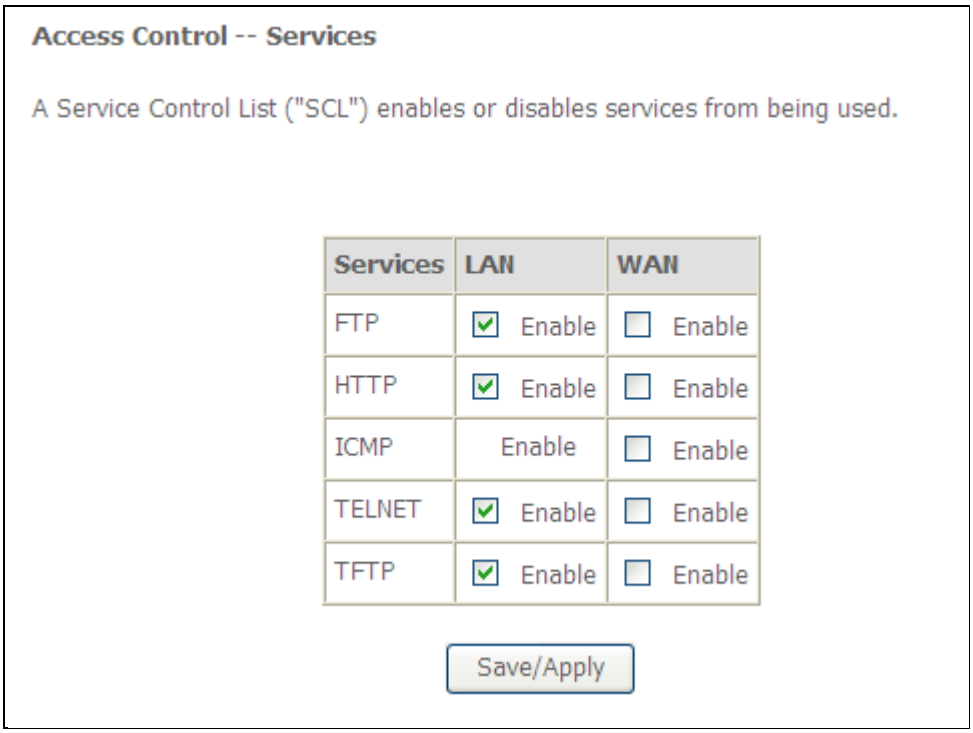
Table 8-13 describes the fields of the Passwords window.

Table 8-13 Field descriptions

Field	Description
Username	Enter the username, default is admin..
Old Password	Enter the old password.
New Password	Enter the new password.
Confirm Password	Retype the new password to confirm.
Apply/Save	Click to save changes.

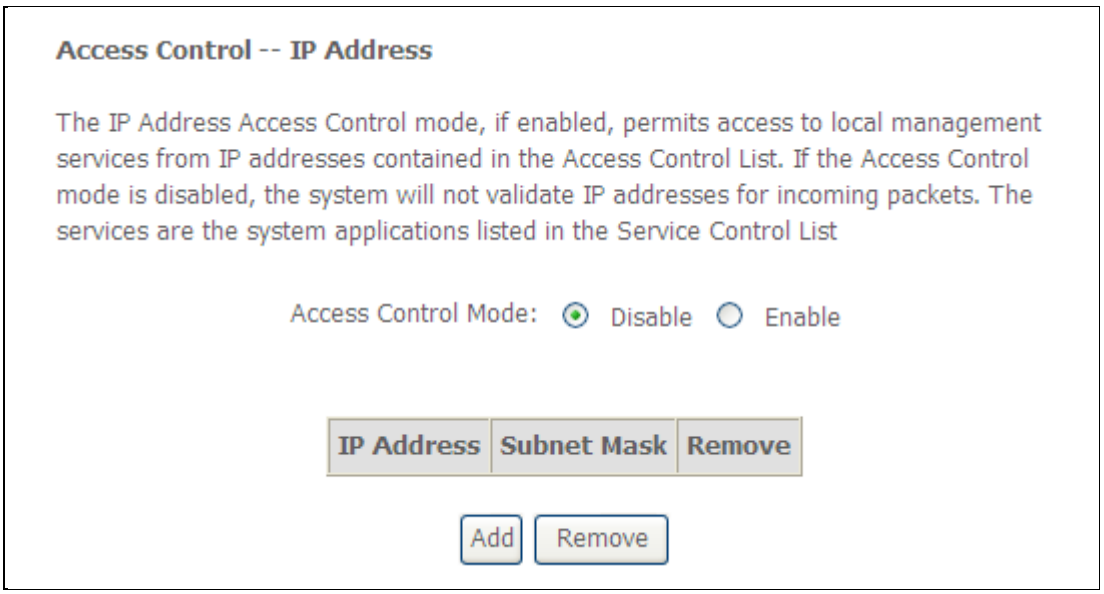
Services

The Services window enables you to enable or disable services
Select **Services** from the **Access Control** menu to open the Services window

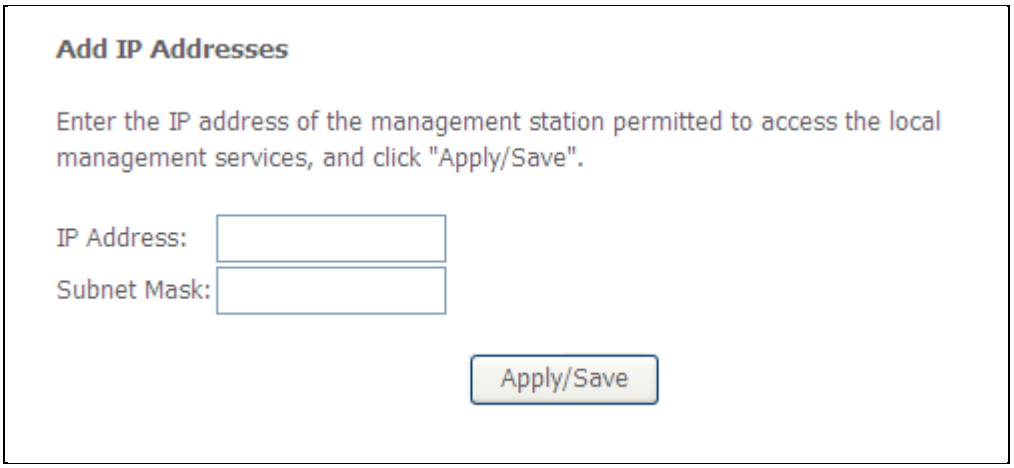


IP Addresses

The IP Address Access Control mode, if enabled, permits access to local management services from IP addresses contained in the Access Control List. If the Access Control mode is disabled, the system will not validate IP addresses for incoming packets. The services are the system applications listed in the Service Control List.
To access this window, click the **IP addresses** button in the **Access Control** directory.



Click the **Add** button, access the following window displayed on the next page.



Input the IP Address and Subnet Mask which you want to configure and then click Apply to enable this IP address

Update Software

The Update Software window enables you to update the software version for the gateway.

Warning

Software updates will result in lost settings.

Note: Before updating the software version, you need to download the latest version online or obtain the latest version from your ISP.

Select **Update Software** in the **Management** menu to open the Update Software window; see Figure 8-14.

Figure 8-14 Update Software window

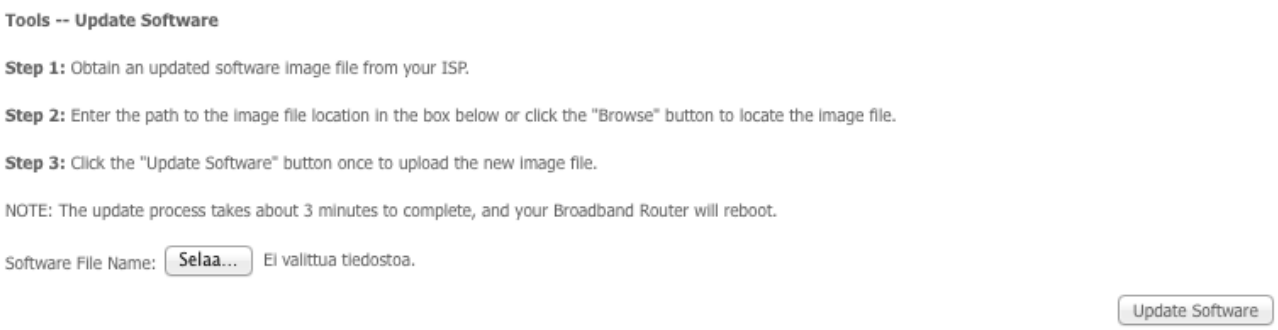


Table 8-15 describes the fields of the Update Software window.

Table 8-15 Field descriptions

Field	Description
Software File Name	Enter the file name of the software update or click **Browse** to locate the file.
Update Software	Click to update the software. **Note:** The gateway will reboot once the software update has been loaded successfully.

Reboot

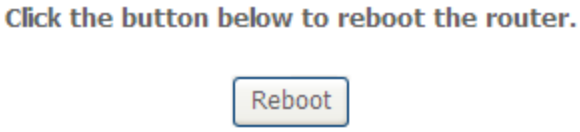
The Reboot window enables you to restart the TW-EAV510 AC Router.

Caution

Rebooting the gateway will drop all current connections.

Select **Reboot** in the **Management** menu to open the Reboot window; see Figure 8-56.

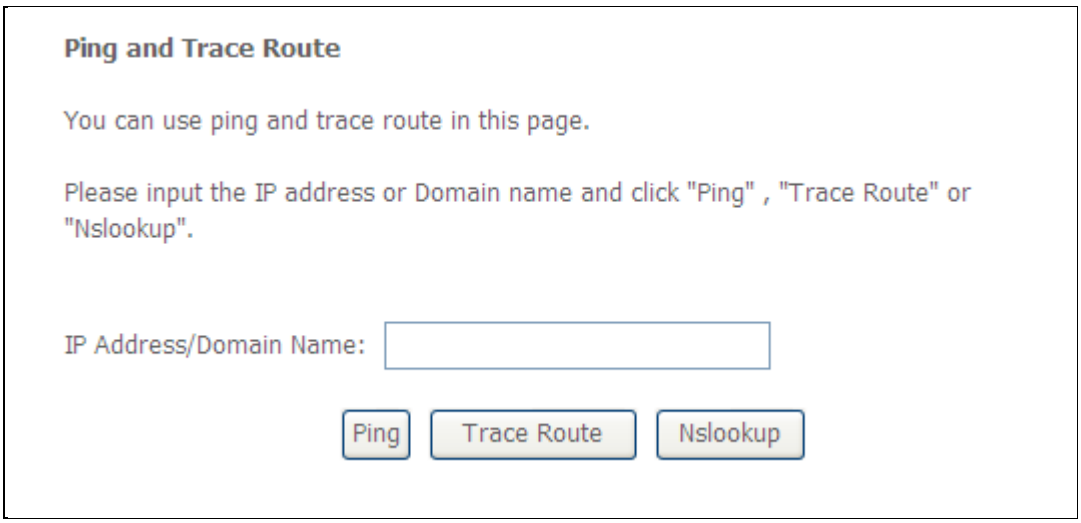
Figure 8-56 Reboot window



Click **Reboot** to restart the device

Tools

This page will help you to diagnostic the status of your Network. You can use “Ping”, “Trace Route” and “Nslookup” methods in this page. After you input the IP address or Domain name, click "**Ping**", "**Trace Route**" or "**Nslookup**" button.



9 Troubleshooting

Overview

Purpose

This section identifies common problems that can arise during the use of the TW-EAV510 AC Router and offers solutions.

Troubleshooting table

Problem	Troubleshooting suggestion
LEDs	
Power LED does not come on after power is switched on.	• Check the outlet by plugging in another electronic device. • Call the customer service number or return the TW-EAV510 AC Router to the vendor.
Internet LED is off.	• Verify that your TW-EAV510 AC Router is properly configured for TCP/IP. • Ensure that the correct network adapter driver is installed for your operating system. If necessary, reinstall the driver. • Check that the speed of the network adapter or duplex mode has not been configured manually. It is recommended that the adapter be set to auto-negotiation. • Ensure that the network connection is established before launching the browser. • In the network connection tab, verify

Problem	Troubleshooting suggestion
	that your username and password are correct.
LAN LED does not come on after connection is established.	• Verify that the power is switched on. • Ensure that the cable is plugged into the TW-EAV510 AC Router and a LAN computer. • Check the network adapter or the cable connections for defects.
Internet Access	
The device cannot access the Internet	Run a health check on your device. Use the ping utility to check whether the device can communicate with the TW-EAV510 AC Router LAN IP address (by default 192.168.0.254). If it cannot, check the Ethernet cabling. If you statically assigned a private IP address to the computer, verify the following: • Check that the TW-EAV510 AC Router IP address on the device is your public IP address. If it is not, correct the address or configure the device to receive IP information automatically. • Verify with your ISP that the DNS server specified for the computer is valid. Correct the address or configure the device to receive this information automatically.
The LAN devices cannot display web pages on the Internet.	Verify that the DNS server IP address specified on the device is correct for your ISP. If you specified that the DNS server be assigned dynamically from a server, then verify with your ISP that the address configured on the gateway is correct, and then you can use the ping utility to test connectivity with your ISP's DNS server.

Problem	Troubleshooting suggestion
Web pages	
I forgot my user ID or password.	If you have not changed the password from the default, try using **admin** as both the user ID and password. Otherwise, you can reset the device to the default configuration by pressing the Reset Default button on the back panel of the TW-EAV510 AC Router three times. Then, type the default User ID and password shown above. **Note:** Resetting the device removes any custom settings and returns all settings to their default values.
I cannot access the web pages from my browser.	• Use the ping utility to check whether the device can communicate with the TW-EAV510 AC Router LAN IP address (by default 192.168.0.254). If it cannot, check the Ethernet cabling. • Verify that you are using Internet Explorer or Netscape Navigator v4.0 or later. • Verify that the device's IP address is defined as being on the same subnet as the IP address assigned to the LAN port on the gateway**.**
I cannot login to the configuration pages.	• Verify that the username and password are correct. • Ensure the PC indicator is on and the TCP/IP configuration is correct. • Ensure the data indicator is on when using Ping command. • Try resetting the device.
I'm having trouble accessing some web servers.	• The MTU of the operating system might be at or near its maximum. • The operating system might need to be patched.
Changes to the web pages are not being retained.	Be sure to Apply/Save after any changes to the web pages.

10 TCP/IP configuration

Overview

The following procedures provide TCP/IP configuration instructions for all supported operating systems.

Windows Vista & 7/8

1. Open **Network and sharing Center** from the Control Panel.
2. Open **Manage network connections** from the **Network and sharing Center**.
3. Right-click **Ethernet connection** and select **Properties**.
4. Under the **General** tab, select **Internet Protocol (TCP/IPv4)**, and click **Properties**.
5. Select the **Obtain an IP address automatically** radio button.
6. Select the **Obtain DNS server address automatically** radio button.
7. Click **OK** to save the settings.

END OF STEPS

Windows XP

1. Open **Network Connections** from the Control Panel.
2. Right-click **Ethernet connection** and select **Properties**.
3. Under the **General** tab, select **Internet Protocol (TCP/IP)**, and click **Properties**. The Internet Protocol (TCP/IP) properties window appears.
4. Select the **Obtain an IP address automatically** radio button.
5. Select the **Obtain DNS server address automatically** radio button.
6. Click **OK** to save the settings.

END OF STEPS

Windows ME/2000/98/95

1. Open **Network and Dialing Connections** from the Control Panel.
2. Right click the **Ethernet connection** icon and select **Properties**.

3. Select **Internet Protocol (TCP/IP)** component, and click **Properties**. The Internet Protocol (TCP/IP) properties window appears.
4. Select the **Obtain an IP address automatically** radio button.
5. Select the **Obtain DNS server address automatically** radio button.
6. Click **OK** to save the settings.

END OF STEPS

Windows NT

1. Open **Network** from the Control Panel.
2. From the **Protocol** tab, select the **Internet Protocol (TCP/IP)** component, and click the **Properties** button.
3. From the **IP Address** tab, select the **Obtain an IP address automatically** radio button.
4. From the **DNS** tab, verify that no DNS server is defined in the **DNS Service Search Order** box and no suffix is defined in the **Domain Suffix Search Order** box.

END OF STEPS

Mac OS

1. Open **System Preferences** from the Panel.
2. Choose **Network** from **Internet & Network**.
3. Make sure the window is unlocked. If it is locked, click the lock to make changes and enter the password for authentication.
4. From the **TCP/IP** tab, choose the **Using DHCP** on **Configure IPv4** field.
5. Click on the **Apply Now** button to obtain an IP address from the DHCP server.

END OF STEPS